E

norma

The hunt of the century

LEAMINGTON GUNS
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Focus on norma

Norma is my seventh company. At the beginning of my working career I changed companies and industries because I wanted to gain experience, but nowadays it´s presumably that new offers are always more flattering.

As far as Norma is concerned, I´d like to say that my colleagues and I are in the dream industry! I say this jokingly, but it is also very serious because the truth is that our product is a small but very significant part of the hunter´s dream of a beautiful autumn morning in the forest when the sun is rising and the trees are shimmering in green, gold, and red. You are sitting there with a superb rifle across your knees. And of course it´s loaded with Norma ammunition for the moment when the big game suddenly appears!

The dream industry is the very best of industries, but it is very demanding. Preferably, we should be the best, and, probably, the best is what we are. Norma offers the industry´s largest and most extensive range. We produce some 26 million cartridges a year at the moment, divided among 70 calibers. One fantastic range in which every cartridge gives reliability, precision, and effect. And the Norma trademark adds a solid image.

The dream industry also has another positive characteristic – you can get out and hunt once in a while!

TORBJÖRN LINDSKOG
CEO

• forest • stillness • prepared, zeroed-in • waiting • tense • immediate • pulse • adrenalin •

concentrate • safety off • before a shot is fired the story begins

A century of service to hunters and shooters

Norma Sweden was founded in 1902 by the Enger brothers of Oslo, Norway, who a few years earlier had founded Norma Projektilfabrik A/S in Norway. The name 'Norma' has nothing to do with Norway, as one might expect, but was simply due to the fact that one of the two brothers was inordinately fond of the opera 'Norma' by Bellini.

The Swedish military needed a nationally-based supplier, and Norma Projektilfabrik A/S was invited to become established in Sweden. At that time, Sweden and Norway were joined in a union. The brothers took the train to Sweden and set themselves up about 20 miles across the border, in Åmotfors.

Contacts with shooters all over the world, and Swedish shooters in particular, led to the development of both target and hunting ammunition with an especially high degree of accuracy.

We thank our customers for the trust they have placed in us over the past 100 years. We know that we have lived up to expectations, and that is what we will continue to do in the future.

STRATEGY

Norma is the European market leader in the high-quality hunting and target shooting rifle ammunition sector.
At the moment, we produce some 26 million bullets per year in 70 calibers, which is the largest assortment in the business.

Dealers all over the world are provided with a complete high-class range of ammunition from one and the same supplier, Norma.

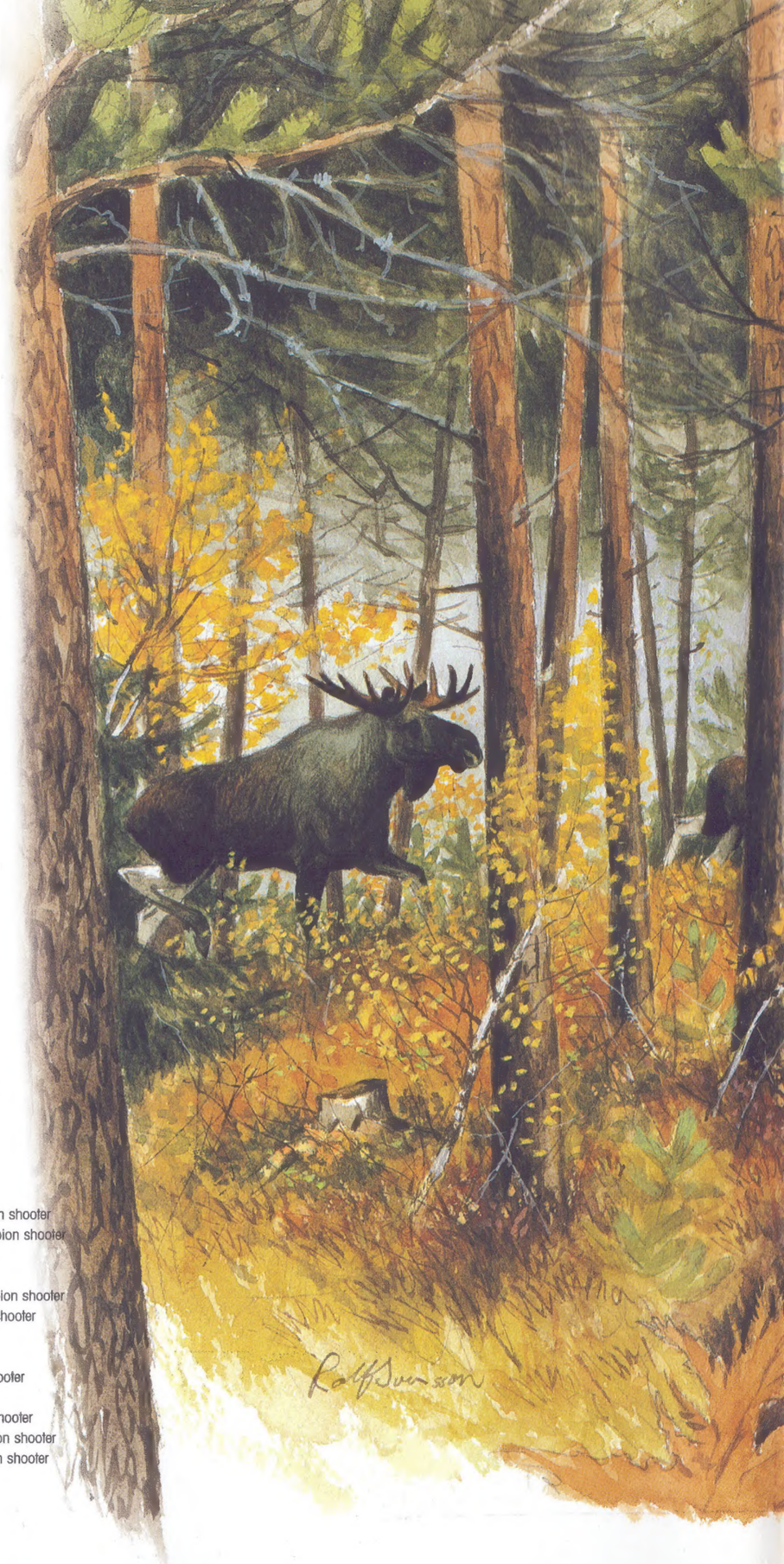
During the years to come we will increase our Norma Brand market share, and at the same time create a major expansion in components, private brands and special ammunition.

Afraid of competition?

Not by a long shot!

TEAM NORMA

Kenneth Engen - Technician: hunter
Kenneth Axelsson - Technician: hunter and champion shooter
Johan Nordström - Tech. support: hunter and champion shooter
Lars-Göran Rauséus - Case production: hunter
Sören Ågren - Production: champion shooter
Mats Karlsson - Case production: hunter and champion shooter
Karl-Erik Bäckman - Quality: hunter and champion shooter
Boris Arvidsson - Technician: hunter
Torbjörn Lindskog - CEO: hunter
Jan Hultman - Production: hunter and champion shooter
Lennart Falk - Marketing: hunter
Anders Brolund - Marketing: hunter and champion shooter
Christer Larsson - Development: hunter and champion shooter
Kenneth Skoglund - Marketing: hunter and champion shooter



Focus on Oryx

our winning design conquers the market

Since the introduction of Oryx in 1996, it has become the top of our line. All over the world, it has won acclaim for its performance.

What is it that makes the Oryx bullets so unique? It is a combination of rapid expansion for killing power, high weight retention and deep penetration for the more demanding shots.

Norma developed the Oryx bullet over a number of years, as we listened to the views of hunters from all over the world. All this information formed the basis for the final design.

To perform in varied hunting situations Oryx is designed with a core bonded to the jacket. The bullet still expands rapidly, but the bonding prevents a separation of the jacket from the core. This allows the bullet to penetrate deep into game to reach the vital organs. The Oryx is unsurpassed in its design. It is suitable for many types of game such as deer, stag, moose, wild boar and black bear.

BONDED BULLET

What can happen with a non-bonded bullet can be clearly seen in the left-hand example. The lead core has left a gap in the jacket, which is not optimal.

Jacket and core should remain together after expansion. The bullet on the right shows how the integrity is retained even when we rotate a sectioned bullet a quarter of a turn.

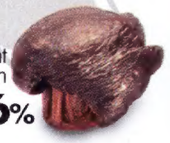
THE WEIGHT RETENTION SPEAKS FOR ITSELF

What all manufacturers strive for is to make bullets that retain their integrity after impact with the target. High weight retention means maximum energy discharge and minimum tissue damage.

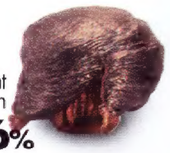
In virtually all cases, Oryx shows a weight retention of at least 90%.

All our customers tell us that this is far too modest a statement. Bullets sent in from hunters show virtually 100% weight retention!

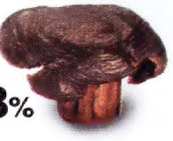
Weight retention **96%**



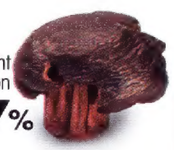
Weight retention **96%**

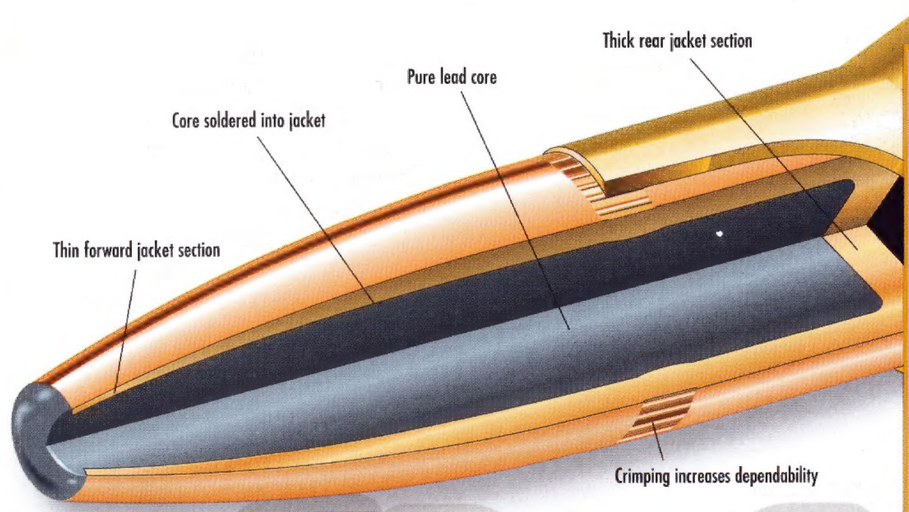


Weight retention **98%**



Weight retention **97%**





MOOSE HUNT WITH ORYX

"It was 1999 and the tenth year that I'd gone off alone in my car up to Jämtland to hunt moose. You might wonder if any normal person would do this — drive 500 miles, then hunt, skin and butcher the animal until well into the night. Maybe this has something to do with my desire to hunt.

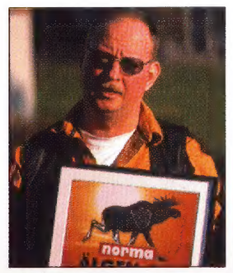
It was the second year I'd loaded my 6.5x55 rifle with Norma's Oryx 156 grain load for moose hunting. I have in a number of cases successfully taken large game with this load, which easily lives up to the claims made in Norma's advertisements. In the 1998 – 2000 hunting seasons I shot moose in Sweden, as well as red deer, fallow deer, and wild boar in Germany, all with Oryx. During the most recent moose hunt we recovered four Oryx bullets from various moose, two of those moose with a dead weight over 700 lbs. The entry path was about 1 inch wide, with very little tissue damage.

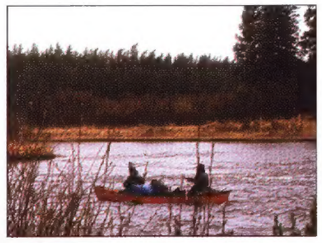
When I got home, I checked the bullets on the scale and found that not a single round weighed less than 155.4 grains — a weight retention of over 99% for all of them! It is often the first shot that is the most important, so with Norma Oryx 156 grain in 6.5x55, I can promise that one well-aimed shot will do the job."

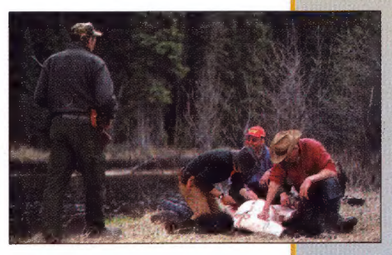
Good hunting

Peter Jonasson, Sweden

More than 99% weight retention.







With Norma in Namibia

Victor Pletsers, the leading Norma dealer in Belgium, shot this large kudu in the mountains of Namibia using Norma .300 Win. Mag. Oryx at 300 yds range.

"I'm very impressed that one can take down this animal with only a single shot. It is because of the perfect precision of the Oryx ammunition. I congratulate Norma."

Victor Pletsers, Belgium

Norma Running-Moose winner shoots bear in Canada!

Leif Olsson from Jämtland Sweden became the first winner of our new training contest, Norma Runing-Moose. Leif, who is an excellent marksman and hunter, was rewarded for his efforts with a hunt that he will remember for the rest of his life.

"It was a fantastic time from the day I was informed about winning. The highlight was of course the hunt in Canada. We paddled for 10 days along the Firebag River, which is about 400 miles north of Edmonton, Alberta. One afternoon, as my guide Oscar and I passed a small island in the river, it happened. A large male black bear reared up, probably startled by the noise of the canoe. Oscar reacted quickly and steered the canoe, while I braced myself against the bow and fired. The bear turned around and fell back into the same place in which he'd been sleeping. I had a fantastic success with the help of Oryx from Norma."

Good hunting

Leif Olsson, Sweden

vulkan
stops the animal

If you want a bullet that puts the animal down, you should choose Norma Vulkan. This is one of the conclusions of a major research project covering 26 611 game kills. It should be noted that no bonded bullets were included in the survey.

During the seasons 1990 to 1996, French hunters filled in survey forms. These forms stated caliber, bullets, ammunition used, where the hit occurred and how long the game continued to run after the shot. 26 611 reports were collected by the French hunters' organization.

Their reports showed that the Norma Vulkan was the best choice of bullet, and that 9.3x62 was the most effective caliber. The majority of the games covered in the reports were roe deer, wild boar and stag.

The most popular caliber in France by far was 7x64. Second was the .300 Win. Mag. which is gaining more and more supporters worldwide. The third most popular caliber listed in these reports was 9,3x74R. The remaining responses were split over a large range of calibers.

CALIBER 9,3x62

In the french report, the respondent stated whether the animal dropped on the spot, or ran more or less than 10 yds before falling.

When the answers were examined, it was clear that game hit with the caliber 9,3x62 had the very best effect.

84% reported that game shot with caliber 9,3x62 ran less than 10 yards. In second place was caliber .270 Win. with 60% of the game falling in a 10-yard range. 55% of caliber 8x68S and 42% of the popular caliber 7x64 dropped in the 10-yard range.

Wild boar have a reputation of being hard to kill, but these reports did not support that assumption. The stag seemed to be the game that ran the farthest distance after being shot.

VULKAN'S PERFORMANCE

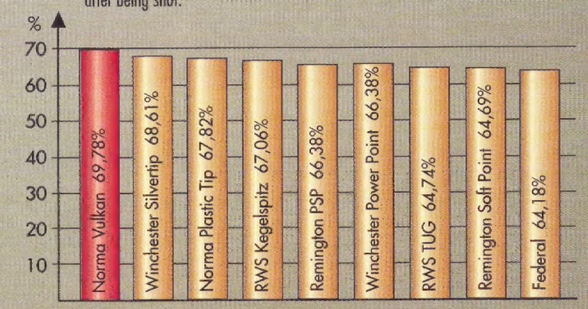
Hunters also recorded the bullets and ammunition they used. In comparing all calibers, Norma ammunition and bullets were the brand that came out on top.

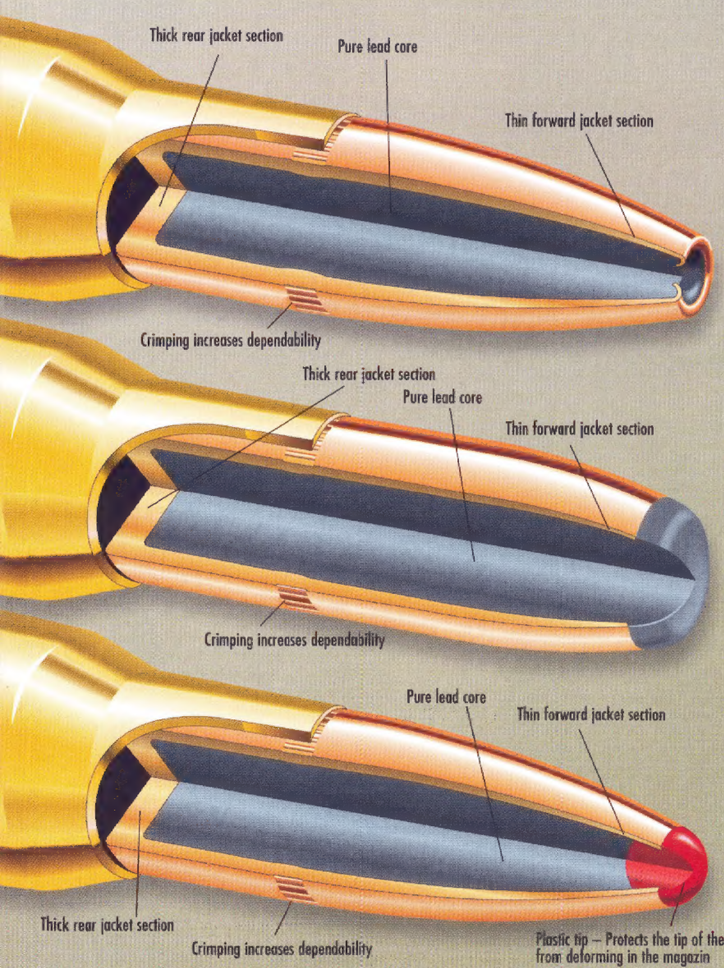
Using the Norma Vulkan, 70% of the animals were dropped within 10 yds. The Winchester Silvertip came in second and Norma Plastic Tip was third.

The diagram below shows clearly that, among not bonded bullets, it is the slightly softer bullets that kill most effectively.

Unfortunately, there were very few cartridges such as .338 Winchester, .358 Norma Mag., or .375 H&H Mag. in the survey, and for that reason not included in the statistic.

The diagram shows the percentage of game that ran less than 10 yards after being shot.





norma Hunting bullets

To satisfy the constantly increasing requirements and demands of hunters, Norma offers several bullet types to choose from. In addition to Oryx, there are the following three types which have all been developed by Norma. By hunters, for hunters!

VULKAN

Since we introduced Vulkan in 1980, it has been our most popular hunting bullet. The unique aspect of the Vulkan round is its inverted jacket tip that protects it and prevents tip deformation.

The very rapid expansion of the Vulkan round leads in the majority of cases to a rapid kill when shot in the heart/lung area.

ALASKA

Alaska is Norma's oldest bullet – a traditional hunting bullet with a lead tip which has been manufactured since the 1940's. It is known for its excellent expansion and good penetration and therefore very suitable for medium-sized game even at longer ranges and medium velocities.

PLASTIC TIP

The Plastic Tip bullet has a strong jacket that is thin at the nose portion. The core tip is scored for more consistent expansion. The Plastic Tip effectively protects the lead core from being deformed in the magazine of your rifle.

Other hunting bullets

Norma has a close relationship with a number of the world's most prestigious bullet manufacturers. Companies such as Nosler, Swift, Hornady, Barnes, Berger and Sierra supply many millions of bullets each year for Norma's own manufacture and for the manufacture of Weatherby ammunition.

Our unique relationship with these companies means that we have access to the very latest technology in projectile development.

Nosler® PARTITION®

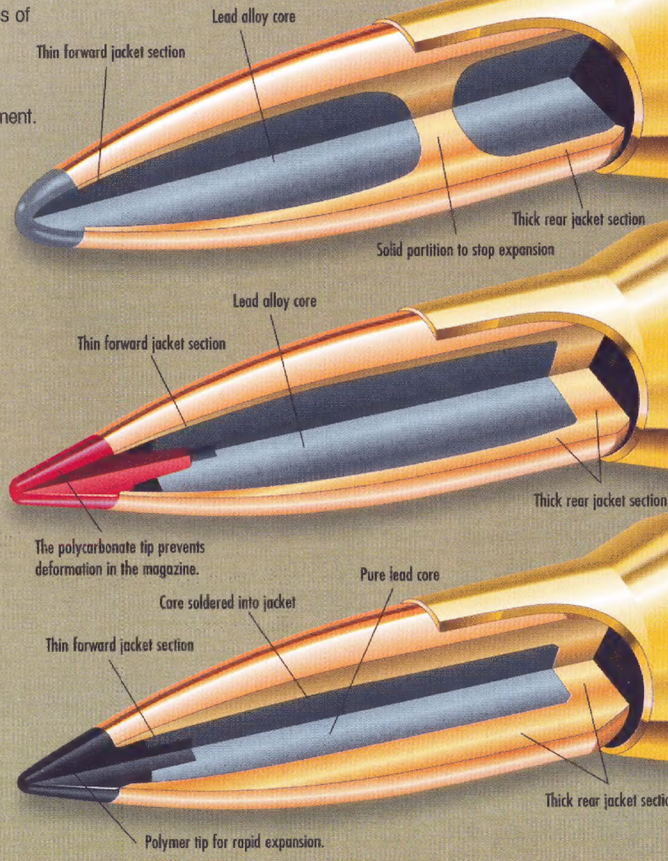
Nosler Partition is a bullet with two lead cores. The forward core expands easily, while the solid intermediate wall guarantees that the bullet retains more than half of the original weight for deep penetration.

Nosler® BALLISTIC TIP®

Ballistic Tip is a boat-tail design with a polycarbonate tip, which prevents deformation in the magazine. This also gives the bullet excellent ballistic properties and rapidly starts the expansion on entry. The tapering jacket surrounding the lead core gives controlled expansion and optimal weight retention at various velocities. The jacket base is strong – a solid support for the bullet's extensive mushrooming.

Swift™ SCIROCCO™

Scirocco is a bullet that combines maximum accuracy with killing power, and is recommended especially for calibers with high velocities. This boat-tail bullet, with it high ballistic coefficient, is very stable in wind, and it's polymer tip means that expansion starts immediately upon impact. Due to the fakt that the jacket is soldered to the lead core, the bullet has controlled expansion and rapid mushrooming.



Focus on TXP

– a super bullet for demanding hunters

Since 1997, we have been offering the famous Swift A-Frame™ bullet as part of our programme under the designation TXP. For many years we had been considering what to include as a big-game line, and Swift A-Frame™ is the conclusion.

Extensive tests have been carried out, some in the factory and others in the field among hunters. We set very high requirements for performance and accuracy, and the final choice was the Swift A-Frame™.

The excellent characteristics of the Swift bullet, especially its deep penetration and very high weight retention, are due to the unique adjustment of the jacket thickness and of the intermediate wall separating the two lead cores.

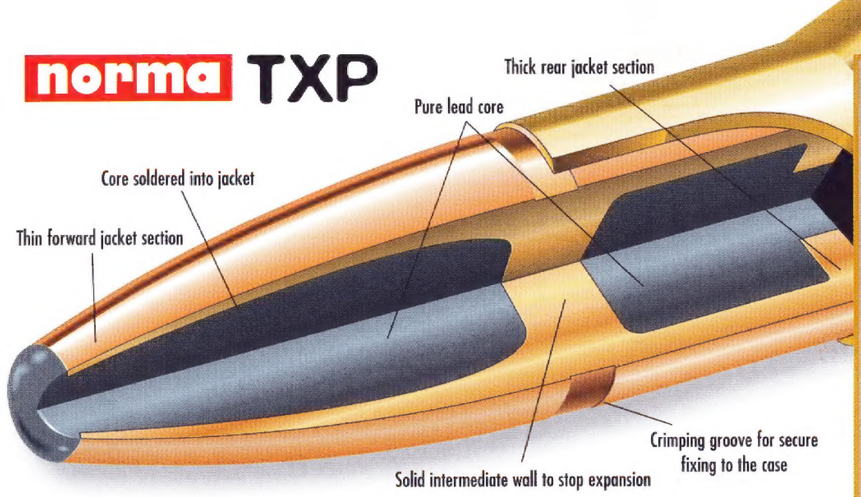
The intermediate wall slows down continued expansion. This, in combination with the fact that the forward lead core is soldered to the jacket, gives the bullet its unique capabilities.

The TXP line is intended mainly for very demanding hunting situations where hits in vital organs must be guaranteed even for large animals.

Our TXP line is therefore the best choice for hunting African big game.

big game • load TXP • very demanding • balance • accuracy • shock effect • of utmost importance • difficult shots • no compromises • absolutely toughest resistance • impressive

norma TXP



ANTELOPE HUNTING WITH NORMA ORYX AND TXP

"Hunting the fantastic antelopes of the Kalahari places the greatest demands on hunter, weapon, and bullet. The rolling landscape is open, with grass and low bushes. The hunter often has to shoot from ranges at the absolute maximum limit for ethical shooting. This requires ammunition with high accuracy, and a balance between good shock effect and penetration.

As travel organiser for Swedish hunters, I was at first somewhat sceptical about using the 6,5x55 caliber for difficult shots like the oryx antelope. But it soon became apparent that Oryx loads functioned well, even at long range. In almost all cases, even the biggest antelopes were shot with good effect.

On one occasion, I was asked to kill an oryx that had been badly injured by an other male oryx. It was difficult to get near the animal, but it eventually fell to an oblique shot. This illustrated how well the TXP bullet in .30-06 caliber penetrated this large antelope on the diagonal."

Good hunting
Petter Stjärne, Norway

BARNES SOLID

Our program for big game hunting in .375 Holland & Holland, .416 Rigby, and .458 Winchester Magnum has now been complemented with the well-known Barnes Solid. This is a homogeneous copper-zinc bullet designed to penetrate the very toughest big game.

The solid construction of this bullet ensures that it penetrates stable, straight and very deep.

With Norma TXP in Zimbabwe

The fact that hunting big game requires a whole lot extra is clear from this report from Senanga Safaris, Matesi, Zimbabwe.

This is a report of a hunt for Cape Buffalo using Norma TXP in .375 H&H caliber.

"I have just returned from a big-game hunt (elephant, buffalo, and lion), and thought that Norma would be interested to know about the effect of the TXP round on buffalo. Personally, I have always thought FMJ/Solid was best for buffalo, but, having seen, and been impressed by, how the Swift A-Frame works on smaller African game such as bush pig, kudu, zebra, and so on, I decided to try shooting a buffalo with Norma TXP 19.4 gram.

The first shot, from the side, at a range of 70 yds, went into the left shoulder, through the lower part of the heart, and was later found in the right shoulder (bullet No 1, attached). As can be seen, it had hit bone. The second and third shots were fired obliquely from the rear when the buffalo began to run, from a range of about 80 yds. The first of these went in low through the right hip. The bullet (No 2) was found in the front part of the stomach. The last bullet (No 3) entered the right hip about 4 inches higher and ended up in the left lung. After this shot, the animal fell and a few minutes later we heard the death roar.

The weight retention of these bullets was, to say the least, impressive, as well was the penetration capability. In the cases of bullets 2 and 3, penetration was about 1.8 yds which shows that the Swift bullet is eminently suitable for hunting buffalo."

Good hunting
Björn Kläppe, Sweden

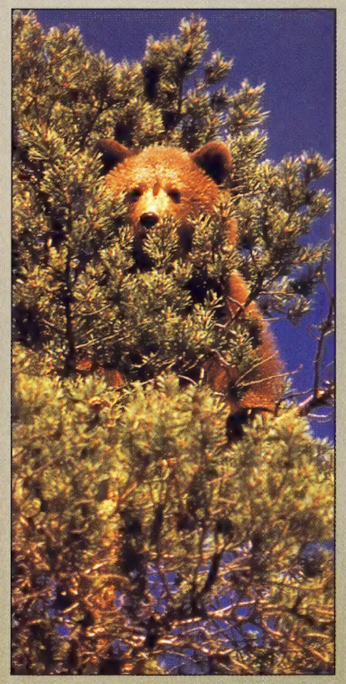
Penetration and expansion in focus

It is impossible for a hunting bullet to perform at its best in all situations. The velocity on impact, the location of the hit, and the design of the bullet are only some of the many factors that can affect the outcome of the shot.

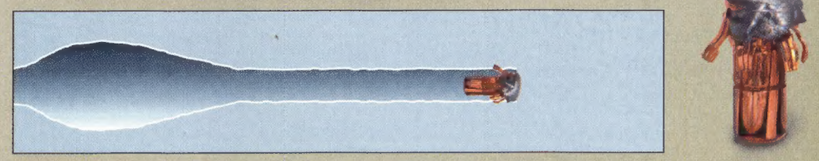
We have produced a schematic diagram of various bullets and how they perform at different velocities in ballistic gelatine. We hope this will help you choose the right bullet for the precise conditions and requirements of your particular hunt.

If the jacket is thin, which means that the bullet expands easily, the effect is usually very good for clean lung shots. However, if the same bullet encounters a heavy bone before it has completely entered the lungs, the effect can be that it expands too rapidly and breaks up before it penetrates deeply enough to damage vital organs. Put simply, penetration is poor.

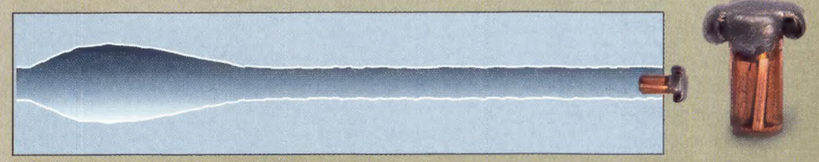
On the other hand, a bullet with a thick rigid jacket to ensure penetration, can perform less well in clean lung shots because the expansion is less dramatic. The result of this is often that the quarry runs longer after being hit. The deep penetration however, ensures that the animal's vital organs are hit and the shot is fatal even if there is an impact on a heavy bone.



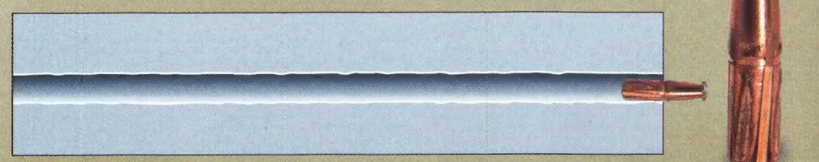
V_0 **1640** fps



VULKAN Weight 180 gr — Despite its low velocity, which corresponds to about 350 yds range from a .30-06, the Vulkan bullet expands.

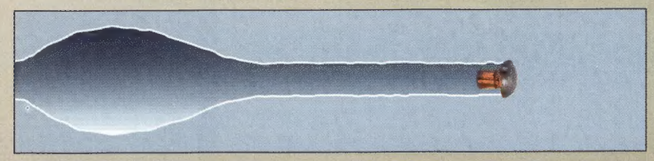


ORYX Weight 180 gr — The Oryx has also expanded, but somewhat less than the Vulkan.

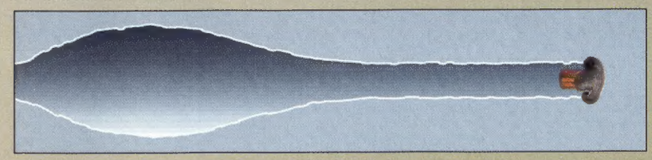


TXP Weight 180 gr — The heavy jacket of the Swift A-Frame has prevented the bullet from expanding significantly. However, penetration is very deep.

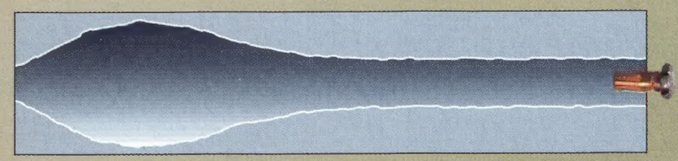
V_0 **2297** fps



VULKAN Weight 180 gr — At this velocity, corresponding to a range of 150 yds from a .30-06, the Vulkan bullet has really expanded. It is also clear, however, that this more notable expansion causes considerably less penetration.



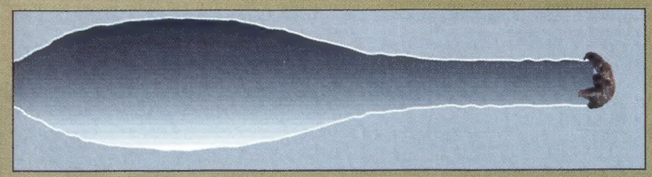
ORYX Weight 180 gr — Notable expansion and good penetration due to the bonding which prevents breakup of the bullet



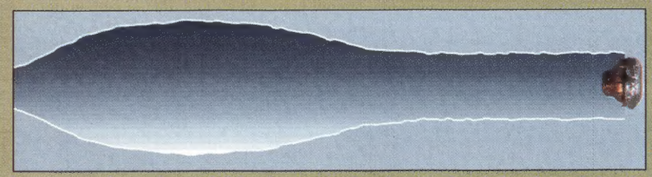
TXP Weight 180 gr — Deep, wide, wound channel.

V_0 **2953** fps

VULKAN Weight 180 gr — Wide initial wound channel. However, penetration is quickly reduced because of the rapid expansion and increased diameter of the bullet, plus the fact that the jacket and the core have begun to separate.



ORYX Weight 180 gr — Wide initial wound channel but good penetration nevertheless. This is because the jacket and core did not separate, giving almost 100% weight retention.



TXP Weight 180 gr — Despite the very high entry velocity, the bullet has retained almost 100% of its weight. The small diameter of the mushroom allows deep penetration.

With Norma in Hungary

Hunting and gamekeeping have a long history in Hungary. Many gold medal trophies and world records for stag, fallow and roe deer have been earned here. Hunts, especially in the inter-war years, were famous for the fabulous richness of the game that existed there.

"I was born and raised in the famous forests along the Danube. After many years in Sweden, I returned to these forests of my childhood to live out an old dream – to hunt stag.

The horse-drawn wagon rolled slowly between towering poplars and shady oaks. The horses pulled smoothly and steadily. It was the middle of September, right in the stag rutting season – something that can't be ignored. Their roaring could be heard from far away. Hunting stag in the rutting season is a great experience. It is much easier to spot and assess these normally wary animals in order to harvest the right ones and create a vigorous population with high quality trophies.

Then we heard a loud roaring even closer. We got out of the cart, loaded and secured our rifles, and slipped quietly into the woods. We arrived in a small clearing where we stopped and we could hear a stag beating the bushes with its antlers. There was obviously a 'granddad' on the way. We hunkered down behind a tree and waited.

Eventually, we heard more roaring and a stag glided out into the open. He stood, raised his head, and bellowed, the breath steaming from his mouth. The antlers were dark with white specks. It was an unforgettable sight. My guide, Zoli, whispered 'Shootable!'

Suddenly my pulse was racing, my heart hammering in my chest, but I kept the cross-hairs steady on the edge of the shoulder-blade and fired off my shot. As the crack of my 7 mm Rem Mag slashed through the silence of the morning, the stag fell and lay motionless.

The Vulkan bullet from Norma had once again done its job well, as on many other occasions on five continents, where I have had the benefit of hunting game of many sorts."

Good hunting
László Kovács, Hungary

Proven quality

Private brand ammunition and components are supplied to several manufacturers of high-quality weapons and ammunition throughout the world.

Norma's well-known quality cases and ammunition have generated increased co-operation with various members of the industry throughout the world:

- Dynamit Nobel
- Browning–Winchester
- Cor Bon
- Chapuis
- Decathlon
- Dakota
- Federal
- Hirtenberger
- MEN
- Sako
- Weatherby

Nosler®
WORKING PARTNERS FOR FORTY YEARS.

Bob Nosler

It is nearly forty years since Norma began marketing the first Nosler Partition® bullets. The revolutionary Norma-Nosler combination resulted in high-performance hunting ammunition.

In 2001, Norma will combine its first century of quality and technology with Nosler's renowned Ballistic Tip® round. The result is a new line of ammunition that will surely set the standard for the hunting ammunition of the future.

Norma and Nosler have a long and rich historic relationship, and, once again, this unique combination has come up with outstanding high-precision ammunition for hunters the world over.

Weatherby – A MILESTONE IN HISTORY

Ed Weatherby

There is no customer that has meant more in Norma's 100-year history than Weatherby Inc of California. This company was started in 1940 by Roy Weatherby with the objective of producing magnum weapons of outstanding performance in their own calibers.

Norma was contacted directly to be part of the project, and it was Nils Kvale of Norma, together with Roy Weatherby, who supported the development. Today, Norma supplies Weatherby with some 50 different cartridge types in 20 calibers.

Ed Weatherby is managing the company today and the co-operation with Norma works just as well as it has done for the last 50 years. No formal contract has ever existed, and the relationship is based entirely on mutual trust. New calibers are introduced now and again, the most recent being .338-06, .375, .30-378, and .338-378 in the legendary Mark 5 model.

The purest classic of all the Weatherby calibers is the .300 Magnum, which was the favourite of the late film star John Wayne.

The outstanding Weatherby rifles have always offered top performance, and we at Norma are proud to be a part of their package.

Rifle manufacturers, all over the world, sight in with Norma!

There's no room for compromise – not for the gun-maker, nor for the ammunition manufacturer. This is why we have such a good working relationship.

The best known and most distinguished weapon-makers from all over the world, sight in their guns with Norma ammunition before shipping. Norma could not get finer references than that!

The highest quality and total reliability are determining factors for the makers of prestige weapons. During sighting in, a completely objective factor – ammunition – is needed if the weapon is to give a true result. The fact that Norma is chosen for this task speaks for itself.

CHAPUIS ARMES
Demas
ČESKÁ ZBROJOVKA
DAKOTA ARMS INC
KRIEGHOFF
BLEIKER
Verney-Carron
Franz Seehuber
Blaser
sako FINLAND
Weatherby

With Norma in Spain

"If you want to know why the Plastic Tip bullet from Norma is the best-selling bullet in Spain, you only need to try it and see its stopping power on a leaping deer in Spain's "Monteria". I have hunted all my life and I am now 74 years old. I think I've tried all the novelties on the market and I can assure you that there is no other bullet with a better balance between velocity, weight, and mushrooming, and with such stopping power, as Norma's Plastic Tip."

Jaime González. Hunter of the Year, Spain

With Norma in Portugal

"For many years, "Montaria" has been the traditional way of hunting big game in Portugal. The hunters surround an area that can be as much as 1250 acres, and then let loose several packs of hounds at strategic points and let them do their job. Each pack consists of 25 hounds, and on long drives we can have up to 300 animals.

On this particular day, there were 25 shooters. I had hunted throughout these lands and knew them well. One of the gamekeepers reported that a large stag, which we saw, was in rut and was heading into my area.

I had loaded my side-by-side Express rifle in 9,3x74R with Norma Plastic Tip. Eventually I saw a group of stags in a row about 60 yds away, but the big fellow wasn't among them. They were trotting, so I sighted on a fine stag that was in the middle of the group. But just before I pulled the trigger, I saw a movement out of the corner of my eye. The old stag had waited for the younger ones to pass before he allowed himself to take the same route. I held back and let the rest of the group pass without firing. But I was repaid for my patience after three or four minutes – which seemed like an eternity – when the old stag came the same way. I aimed for the shoulder through the dense foliage and fired off the right barrel. The stag fell immediately. As usual, Norma Plastic Tip had done its job to perfection and provided me with one of my best trophies."

Fernando Seixas, Portugal

Focus on jaktmatch

for training, competition and hunting

Although initially intended as inexpensive training ammunition, Norma Jaktmatch has been developed to the point where it is also a very popular cartridge for hunting and for competition.

Norma's FMJ Jaktmatch bullets have high ballistic coefficients for flat trajectory and minimum wind drift. This, combined with its good accuracy, makes Jaktmatch a superb choice for target shooting, and small-game hunting.

As with all our ammunition, Jaktmatch is also tested to ensure good performance under extreme weather conditions.

Hunters prepare themselves well before the hunt by practising with Norma Jaktmatch. Don't forget to sight in your gun with the ammunition you intend to use on the hunt itself.

New for this year is Jaktmatch in .300 Win. Mag. and .338 Win. Mag. calibers.

Gradually we will introduce Jaktmatch packaging in a new design that corresponds to the hunting ammunition.

HUNTING WITH JAKTMATCH

"Jaktmatch in .222 Rem is a good training cartridge and especially suitable for fox hunting.

To be able to shoot more than 20 foxes, I have been staying up quite a few nights. But the moon doesn't shine every night. So when the fox comes, you have to have ammunition you can rely on. High accuracy is important, because the fox's head is smaller than it seems in the winter cold. The shape of the nose of the Jaktmatch bullet provides good killing power and a small exit wound, something I value greatly. I have also used the same cartridge for capercaillie and black grouse. Norma Jaktmatch always deliveres a good result."

Asbjørn Fjeld,
Norway

economical • prepared seasons • safety • new calibres • high ballistic coefficient • low wind drift • flat trajectory • don't forget training shots • competition • hunting • low recoil

BALLISTIC DATA FOR JAKTMATCH

Caliber	Bullet type Bullet weight Product no.	Ball. co-effi-cient	Velocity feet per second Muzzle	$V_{100\ yds}$	$V_{200\ yds}$	$V_{300\ yds}$	Zero range, yards	Height of trajectory above line of sight if sighted in at ⊕ yards. For sights 1,6 inch. above bore. 50 yds	100 yds	150 yds	200 yds	300 yds	Wind drift in inches for a 10 m.p.h. cross wind. 100 yds	200 yds	300 yds
.222 Rem.	**Full jacket** 3.2 g/50 gr Product no. 15715	0.192	3199	2697	2247	1843	50 100 150 200	⊕ -0,3 0 0,5	0,6 ⊕ 0,6 1,6	0 -0,9 ⊕ 1,5	-2,0 -3,3 -2,0 ⊕	-11,7 -13,5 -11,7 -8,6	1,5	6,4	15,9
6,5x55	**Hollow point** 6.5 g/100 gr Product no. 16527	0.321	2625	2354	2100	1862	50 100 150 200	⊕ -0,1 0,4 1,1	0,2 ⊕ 1,0 2,4	-1,2 -1,5 ⊕ 2,1	-4,3 -4,7 -2,7 ⊕	-16,7 -17,3 -14,4 -10,3	1,1	4,8	11,3
	Full jacket 7.8 g/120 gr Product no. 16542	0.191	2690	2238	1833	1482	50 100 150 200	⊕ -0,1 0,5 1,3	0,2 ⊕ 1,1 2,7	-1,4 -1,7 ⊕ 2,4	-5,1 -5,4 -3,2 ⊕	-20,9 -21,4 -18,1 -13,3	1,9	8,3	20,8
7mm Rem. Mag.	**Full jacket** 9.7 g/150 gr Product no. 17026	0.443	2995	2780	2576	2380	50 100 150 200	⊕ -0,3 0 0,5	0,6 ⊕ 0,6 1,5	0 -0,9 ⊕ 1,3	-1,8 -2,9 -1,8 ⊕	-9,4 -11,1 -9,4 -6,7	0,7	2,8	6,5
.300 Win. Mag.	**Full jacket** 9.7 g/150 gr Product no. 17545	0.423	3067	2839	2622	2416	50 100 150 200	⊕ -0,3 0 0,4	0,6 ⊕ 0,5 1,4	0,1 -0,8 ⊕ 1,3	-1,5 -2,7 -1,7 ⊕	-8,7 -10,5 -9,0 -6,4	0,7	2,8	6,6
.30-06	**Full jacket** 9.7 g/150 gr Product no. 17651	0.423	2772	2558	2355	2160	50 100 150 200	⊕ -0,2 0,2 0,7	0,4 ⊕ 0,8 1,9	-0,6 -1,1 ⊕ 1,7	-3,0 -3,7 -2,2 ⊕	-12,6 -13,7 -11,5 -8,1	0,8	3,3	7,6
.308 Win.	**Full jacket** 9.7 g/150 gr Product no. 17622	0.438	2657	2456	2263	2080	50 100 150 200	⊕ -0,1 0,3 0,9	0,3 ⊕ 0,9 2,1	-0,9 -1,3 ⊕ 1,8	-3,6 -4,2 -2,4 ⊕	-14,4 -15,2 -12,5 -8,9	0,8	3,3	7,8
.338 Win Mag.	**Full jacket** 14.6 g/225 gr Product no. 18510	0.499	2657	2480	2310	2146	50 100 150 200	⊕ -0,1 0,3 0,9	0,3 ⊕ 0,9 2,0	-0,9 -1,3 ⊕ 1,8	-3,5 -4,1 -2,4 ⊕	-13,8 -14,7 -12,1 -8,6	0,7	2,9	6,7
8x57 JS	**Full jacket** 8.0 g/123 gr Product no. 18009	0.191	2822	2357	1939	1572	50 100 150 200	⊕ -0,2 0,3 1,0	0,3 ⊕ 1,0 2,4	-1,0 -1,4 ⊕ 2,1	-4,1 -4,7 -2,9 ⊕	-18,0 -18,9 -16,1 -11,8	1,8	7,8	19,3
9,3x57	**Full jacket** 15.0 g/232 gr Product no. 19306	0.382	2215	2008	1812	1631	50 100 150 200	⊕ 0,2 1,0 1,9	-0,4 ⊕ 1,6 3,5	-2,9 -2,3 ⊕ 3,0	-7,8 -7,1 -3,9 ⊕	-25,8 -24,7 -20,1 -14,2	1,2	5,1	11,9
9,3x62	**Full jacket** 15.0 g/232 gr Product no. 19318	0.381	2510	2287	2075	1875	50 100 150 200	⊕ -0,1 0,5 1,2	0,1 ⊕ 1,1 2,5	-1,5 -1,6 ⊕ 2,2	-4,9 -5,1 -2,9 ⊕	-18,0 -18,2 -15,0 -10,6	1,0	4,2	9,9

Caliber	Bullet type Bullet weight Product no.	Ball. co-effi-cient	Velocity feet per second Muzzle	$V_{100\ yds}$	$V_{200\ yds}$	$V_{300\ yds}$	Zero range, yards	Height of trajectory above line of sight 25 yds	50 yds	75 yds	100 yds	150 yds	Wind drift in inches for a 10 m.p.h. cross wind. 100 yds	200 yds	300 yds
.22 Long Rifle	**Lead, round nose** 2,6 g/40 gr Product no. 15612	0.15	1066	–	–	–	50	0,2	⊕	-2,4	-7,3	-24,5	3,8	–	–

50 cartridges/boxes.

norma

PISTOL- & REVOLVER AMMUNITION

Working with leading pistol and revolver shooters, the world over, has led to remarkable international success. The Norma Safety Cartridge in 9 mm is used by the police in many countries.

Caliber	Bullet type Bullet weight/Product no.	Velocity feet per second in yards Muzzle	V_{25}	V_{50}	$V_{100\ yds}$	Energy foot pounds in yards E_0	E_{25}	E_{50}	$E_{100\ yds}$	Zero range, yards	Height of trajectory above line of sight if sighted in at ⊕ yards for sights 0.8 inch above bore. 25 yds	50 yds	80 yds	100 yds
.32 S&W LONG	Lead, wadcutter 6,4 g/98 gr. No. 17810	787	759	732	683	136	126	118	102	25 50	⊕ 1,4	-3.0 ⊕	-12.0 -7.1	-21.4 -15.3
9 mm TC LUGER	Full jacket 8,0 g/123 gr. No. 19035	1099	1032	980	899	331	292	263	221	25 50	⊕ 0.6	-1.2 ⊕	-5.8 -3.8	-10.7 -8.2
9 mm TC AOTO	Full jacket 8,0 g/123 gr. No. 19036	1280	1170	1086	972	449	375	323	259	25 50	⊕ 0.4	-0.8 ⊕	-4.2 -2.9	-8.1 -6.5

50 cartridges/boxes.

With Norma in Germany

"Several times before the hunting season, I had seen a six-pointer, but when the hunt was in progress he was gone. After many mornings without any luck, my son and I went out during the rutting season. We did not see any roe deer, and were on our way back to the car when suddenly a roe deer came leaping directly towards the place where we were standing. Clearly he had not gotten wind of us and the dog stayed quiet at my side. To be sure, I looked through my sight to confirm that it was the six-pointer I'd been after. It was! I was holding the rifle steady and the roe deer was standing broadside on to us. The range was about 70 paces, just right, I thought, and fired.

I saw the effect of the Vulkan round through the sight of the .30-06 rifle. It was dead on the spot!
As always, Vulkan had done its job reliably and accurately.

We examined the carcass and found minimal tissue damage. I feel very secure with Vulkan, because I know it has considerable reserves compared with other types of bullet.

We were all happy, but the dog looked a bit sad – he'd had nothing to track that day. But that's often the case when you shoot game with Norma Vulkan."

Good hunting
Josef Auerbacher, Germany

With Norma in Italy

"I'd been after this chamois for several weeks, but could never get close enough to it. Then, one wonderful morning in October, after having been on the move for over three hours at an altitude of 7200 feet, my companion and I at last reached the haunts of the chamois. He stood on a rock about 300 yds higher up.

It was a very good shot and it was not the first time with my 7 mm. I've handled much more difficult tasks with my fantastic Norma ammunition."

Good hunting
Antonio Rigoni, Italy

Norma handloading

components

For many hunters and competition shooters, handloading is both an interesting and educational hobby, where they can tailor ammunition to their own requirements.

Ask your dealer about pre-packed units.

Bullets 100 bullets/box

Caliber	Prod. no.	Weight gr	Bulle type
5,7 mm .224	65701	50 gr	Soft point semi p.
	65702	50 gr	Full jacket semi p.
	65704	53 gr	Soft point Spire p.
	65705	62 gr	Soft point
6 mm .243	66003	100 gr	Soft point semi p.
6,5 mm .264	66520	100 gr	Hollow point
	66514	120 gr	Full jacket pointed
	66509	130 gr	Match HP
	66524	156 gr	Soft point Oryx
	66532	156 gr	Soft point Alaska
	66535	156 gr	Soft point Vulkan
7 mm .284	67003	150 gr	Full jacket semi p.
	67006	170 gr	Soft point Vulkan
	67004	156 gr	Soft point Oryx
7,62 mm .308	67651	150 gr	Full jacket pointed
	67638	180 gr	Soft point Oryx
	67648	180 gr	Soft point Alaska
	67653	180 gr	Soft point Vulkan
	67639	200 gr	Soft point Oryx
8 mm .323	68014	123 gr	Full jacket
	68001	196 gr	Soft point Oryx
	68003	196 gr	Soft point Alaska
	68020	196 gr	Soft point Vulkan
	68001	196 gr	Soft point Oryx
.338	68610	225 gr	Full jacket pointed
9 mm .355	69027	123 gr	Full jacket TC
9,3 mm .364	69305	231 gr	Soft point Vulkan
	69306	231 gr	Full jacket semi p.
	69308	286 gr	Soft point Oryx
	69316	286 gr	Soft point Alaska*

*50 Bullets/boxes

Cases

Caliber	Prod. no.
.220 Swift	25701
.222 Rem.	25711
.223 Rem.	25721
.22-250	25731
5,6x52R	25604
.243 Win.	26001
6 mm Norma BR	26015
6,5-284	26528
6,5 Jap.	26531
6,5 Carcano	26535
6,5x55	26551
.270 Win.	26901
7x57	27001
7x57 R	27004
7x64	27012
7x65 R	27018
7 mm Rem. Mag.	27021
.280 Rem.	27050
7,5x55 Swiss	27511
.30-30 Win.	27630
.308 Win.	27623
7,62 Russian	27634
.308 Norma Mag.	27637
.30-06	27640
.300 Win. Mag.	27666
.303 British	27711
7,65 Arg.	27701
7,7 Jap	27721
8x57 JS	28001
8x57 JRS	28014
.338 Win. Mag.	28504
.338 Lapua Magnum	28507
.358 Norma Mag.	29001
9,3x57	29301
9,3x62	29311
9,3x74 R	29321
.375 H&H Mag.	29501
.404 Jeffrey	21043
.416 Rigby	21060
.458 Win.	21155
.45-2 7/8" Basic	21123
.470 Nitro Express	21163

Cases Norma Weatherby Mag.

Caliber	Prod. no.
.224 Wby Mag.	25740
.240 Wby Mag.	26020
.257 Wby Mag.	26502
.270 Wby Mag.	26912
7 mm Wby Mag.	27032
.300 Wby Mag.	27660
.340 Wby Mag.	28602
.378 Wby Mag.	29512
.416 Wby Mag.	21065
.460 Wby Mag.	21160

Powder

Powder type	Prod. no	Canister gram	For USA Prod. no.	Canister pound
Norma 200	93200-5	500	93200-8	1
Norma 201	93201-5	500	93201-8	1
Norma 202	93202-5	500	93202-8	1
Norma 203-B	93203-5	500	93203-8	1
Norma 204	93204-5	500	93204-8	1
Norma MRP	93215-5	500	93215-8	1
Norma MRP-2	93216-5	500	93216-8	1

USE THE VERY BEST QUALITY COMPONENTS

Although I handload for quite a few modern factory cartridges, my great interest in reloading has always been British double rifle cartridges. There was some tradition of reloading in the British arms trade, and black powder- and some early nitro rifles were supplied with reloading tools. However, this practice seems to have died out in the first part of the twentieth century and continued until the Kynoch factory ceased production in the late 1960´s.

When I started shooting double rifles in the 1980´s it was strictly a handloading proposition. By careful selection of best quality components I found it possible to duplicate the original British cartridge ballistics.

This allowed the double rifles to regulate (both barrels shooting together), and hence put these great firearms back into the hunting fields as useful tools. Creating successful ammunition for obsolete cartridges gives a great sense of personal pride and achievement. For myself, it has become an absorbing hobby that has provided many challenges. I have fired thousands of rounds of ammunition all of which were handloaded and tailored to specific double rifles.

Even today, when there is again some factory ammunition available for British cartridges, handloading still has an important role. Like single barrel rifles, the very best performance from a double rifle will come from ammunition specifically made for that particular rifle.

One lesson that I have learnt over the years is to use the very best quality components available. There is no point in going to all the trouble of loading ammunition and shooting an expensive double rifle if the components then let you down. Norma makes a range of cases and powders that are world class. Using Norma components you will not have to worry about the quality of your ammunition letting you down out in the hunting field.

Graeme Wright, Australia

Author of: ***Shooting the British Double Rifle***

Powder with exceptionally high quality. Norma's various powder types have a very wide range of application and cover loadings for most calibres.

NORMA 200
Our fastest rifle powder is suitable for smaller cartridges such as .22 Hornet and .222 Rem. It is also suitable for loading with light bullets in low velocities for smaller calibers such as .308 Win.

NORMA 201
Very suitable for calibers with small casing volumes relative to bullet diameter, such as 9.3x57 or .45-70. Also suitable for medium casings with light rounds such as .30-06.

NORMA 202
Specially produced to give maximum performance in 7.62 Nato. A very suitable powder for medium calibers such as 8x57, 9.3x62, or 9.3x74 R.

NORMA 203-B
A specification slightly altered from the former 203. A well-known powder usable from .22-250 to .358 Norma Mag. Very well suited for 6 mm Norma BR and .308 Win loaded with heavier rounds.

NORMA 204
A slow-burning powder which gives good performance and often very high accuracy in calibres such as 6.5x55 and .30-06.

NORMA MRP
A very flexible "magnum powder". Suitable for a range of calibres with relatively large casing volumes. Well-known for many years as giving top performance in all magnum calibers.

NORMA MRP-2
An excellent choice for other overbore calibers such as 7 mm STW, 6.5-284, and 6.5-06. A fine-grain powder that facilitates filling.

With Norma in Finland

In autumn 1999, I shot three bears, in all cases using Norma Oryx 180 gr in .308 Win calibre.

The Oryx bullet functions outstandingly well even with bear. Not one single bullet broke up. The enclosed bullet killed a male bear that weighed 530 lbs and the bullet was found when skinning the bear right under the skin at the opposite side.

I thought perhaps you'd like to see this. Absolutely the best cartridge I have used. Thanks you very much!

Good hunting
Seppo Toivonen, Finland

With Norma in New Zealand

I took my horn and blew a loud blast. In a few seconds, he appeared at the trot, antlers tilted back, and approached rapidly through the open beech woods of Fiordland.

With one hand on my trusty hunting rifle and the horn in the other, I saw that he was ready to leap right past, so I gave another loud blast on the horn. He came to a complete standstill. Just twelve meters away. I could see how wide he was, and what royal antlers he had. But there was no time to count the points. I blew a soft, low moan on the horn to this stag, and he walked straight towards the rocky edge where I sat amazed. What a sight!

Slowly, I raised the barrel, needing no sighting. We made eye contact, I increased the pressure on the trigger and felt the recoil. He fell where he stood.

With great anticipation I went to admire this fine trophy – an outstanding twelve-pointer, high and wide. I used Norma ammunition for the shot that counted.

James Pain
Auckland, New Zealand.

6 mm Norma BR – the

world's foremost

match cartridge

International 300-meter rifle shooting is a form of competition which places the highest demands on the ammunition in terms of accuracy and minimum wind drift.

In the early 90's, Norma's R&D department, headed by Christer Larsson, started a project focused on replacing the .308 Win. which had dominated the sport since the 60's.

They were looking for a cartridge with less recoil than the .308 Win., but with the same or better accuracy combined with minimum wind drift.

The work resulted in the 6 mm Norma BR cartridge which provided the right combination of properties. It has considerably lower recoil than the .308 Win., which allows the shooter to concentrate better. It also has less wind drift than the .308 Win. but equally good accuracy.

FROM 0 TO 80% OF THE MARKET IN 5 YEARS

The Swedish national team used 6 mm Norma BR as early as the 1994 World Championships with exceptionally good results.

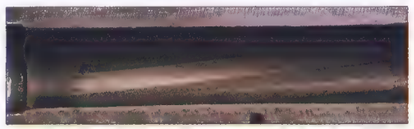
When the cartridge was released in 1995, the Diamond Line concept was simultaneously introduced. The breakthrough was instant. The cartridge was a success and is now used by 80% of the world's elite competition shooters.

BARRELS RETAIN ACCURACY LONGER WITH DIAMOND LINE

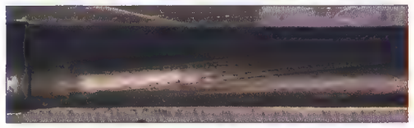
The enormous forces that build up in the barrel, cause severe wear to lands and grooves. Here you can see a close-up of the wear in three different barrels of 6.5x55 in front of the chamber after some 10,000 shots with Norma Diamond Line Bana, 3,700 with uncoated bullets, and 7,000 with Norma Diamond Line Fält.

Compare the results for yourself. The barrel retains its accuracy more than twice as long when Norma Diamond Line is used from the outset. This is because Norma Diamond Line is coated with molybdenum disulphide and a protective layer of wax. Friction is reduced which means that the bullet travels further along the barrel before peak pressure is reached. The result is lower wear and improved accuracy.

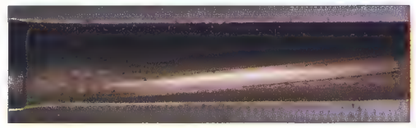
10,000 shots
with Diamond Line Bana, 130 gr.
V_0 2625 fps.



3,700 shots
with an uncoated bullet, 140 gr.
V_0 2789 fps.



7,000 shots
with Diamond Line Fält, 130 gr.
V_0 2953 fps.



6 mm Norma BR Diamond Line took 11 out of 12 medals!

Today, virtually all of the world's elite marksmen shoot with 6 mm Norma BR Diamond Line.
At the CISM World Military Championships in Turkey in 2000, the 6 mm Norma BR Diamond Line showed off it's remarkable capabilities again.

A world-leading match cartridge, stable in wind, with better accuracy and lower recoil than the .308 Win makes Norma shooters hard to beat.

The shooters who chose 6 mm Norma BR Diamond Line won 11 out of 12 medals.

Afraid of competition?

Not by a long shot!

RESULT:

300 m rapid-fire team		**300 m rapid-fire individual**	
1. Norway	Norma*	1. Dubis, USA	Norma*
2. USA	Norma*	2. Bassham, USA	Norma*
3. Switzerland	Norma*	3. Larsen, Norway	Norma*
300 m Half-match team		**300 m Half-match individual**	
1. USA	Norma*	1. Dubis, USA	Norma*
2. Switzerland	Norma*	2. Uptagrafft, USA	Norma*
3. Finland	Lapua	3. Burger, Switzerland	Norma*

*6 mm Norma BR Diamond Line

Medallists half-match ind. with Norma Diamond Line
Gold: Glenn Dubis USA, silver: Eric Uptagrafft USA and bronz: Daniel Burger Sweitzerland

Gold in rapid-fire with Norma Diamond Line
the Norwegian team.

DIAMOND LINE – THE BEST SOLUTION

John Olav Ågotnes from Norway belongs to the shooting elite of Scandinavia.

He handloads in 6.5x55 caliber with Diamond Line:

1st in Nordic Championship Fält 1998
2nd in Nordic Championship Bana 1999
1st in the A press 1998
1st in National Shooting Competition 1999.

"As a shooter in range, field and rapid fire, I find everything I need in Diamond Line bullets and Norma 204 powder. Previously, I used different kinds of bullets and powders depending on the discipline in which I was going to compete. But, in my opinion, the 130 gr Norma Diamond Line bullet gives the same fine accuracy from 2450 fps right up to 2950 fps.

For field shooting I load to 2625 fps, which gives a combination of flat trajectory, low wind drift, and accuracy that no other round can match. After some 4,000 shots with this load, velocity reduction due to barrel wear was only about 30 fps. The corresponding figure for uncoated cartridges I'd used previously was 100 – 150 fps. So I can use the same powder weight and range-table for the whole field season. It gives a feeling of confidence when the bullet hits the middle of the target regardless of range.

For range shooting, I also load to 2625 fps, which gives high accuracy, negligible recoil, and 50%–70% longer barrel life compared with traditional bullets. The increased barrel life confers a financial advantage that is really noticeable. To illustrate the comparison in ammunition, I dropped only 2 points in 38 5-shot series prone in competitions in 1999!

Cleaning and maintenance of the barrel after 300 – 500 shots is much easier than previously, because jacket stripping with Diamond Line is only a fraction of what you get with uncoated bullets. I think that Diamond Line and Norma powder are the best solutions."

Good shooting
John Olav Ågotnes, Norway.

Many victories for 6 mm Norma BR!

"Like many others, I can be very positive about Diamond Line. As a competition shooter with many years experience, I'm always looking for the best. With Diamond Line I've taken a major step towards my destination.

With both 6 mm BR and .308 Win I've had my best results with Norma Diamond Line – 598 points out of 60 shots, prone.

I shot with the same barrel for an incredible time without loss of accuracy. It is clear to me that the coating prolongs barrel life in both 6 mm BR and .308 Win.

As a gun dealer, I follow closely all new developments. In Germany, Diamond Line is a very well-known product. Since its introduction, more than 50% of the medals in the German Championships are regularly won by using Norma Diamond Line.

Internationally, things are moving in the same direction. More and more elite shooters in the world class choose Norma Diamond Line – with a high degree of success."

Good shooting
Erich Prückel,
Germany

"When Norma Diamond Line was launched, I was already curious about this revolutionary inovation. After long experience I knew that only the best is good enough if you want to be among the top shooters.

And my latest placings – second in the World Championships, and a bronze medal in the European Championships, were achieved with 6 mm Norma BR Diamond Line.

As trainer of the German National CISM team I rely totally on Norma Diamond Line. In the German modern pentathon, 6 mm Norma BR Diamond Line was used with great success. The team took first place in the 200 m rifle in the Military World Games in 1999!

Using the 6 mm Norma BR Diamond Line, with the 105 grains Berger bullet, I myself shot the maximum possible in the 60-shot prone – 600!"

Good shooting
Rudi Krenn
Germany

Norma presents it´s
target shooting
program – for accuracy!

With Diamond Line, Norma has designed a cartridge that meets customers' needs in both national and international shooting – two divisions that place entirely different demands on ammunition.

National shooting places extra high demands for a bullet with high ballistic coefficient (flat trajectory, low wind sensitivity), and superb accuracy.

These are just the characteristics that make Diamond Line an unbeatable round for long range shooting. It's also perfect for target shooting where lower velocities are often preferred.

6,5x55 Diamond Line Bana

Created for national target shooting. Maximum accuracy, soft recoil, moly coated bullet for increased accuracy and minimal wear.

V_0	2625 fps
Bullet	8,4 g/130 gr HP Diamond Line
Coefficient	0,548

6,5x55 Diamond Line Fält

Created to withstand tough conditions. Flat trajectory, with moly coating, minimum wind sensitivity and championship accuracy.

V_0	2953 fps
Bullet	8,4 g/130 gr HP Diamond Line
Coefficient	0,548

6,5x55 Golden Target

Replaces Silvertorped and FältElit cartridges and is excellent for both short and long range. High accuracy. Uncoated bullet.

V_0	2723 fps
Bullet	8,4 g/130 gr Hollow point
Coefficient	0,548

BALLISTIC DATA

Caliber / Product name	Product number	Ball. coef.	Bullet type	Bullet weight gram	Bullet weight grains	Velocity feet/sec. Muzzle	Height of trajectory above line of sight if sighted in at ⊕ yards. For sights 1,6 inch above bore. 100 yds.	200 yds.	300 yds.	400 yds	500 yds	600 yds	Wind drift in inches for a 10 m.p.h. cross wind 300 yds	600 yds
6,5x55														
Banskytte/Rekrytt	16523	.345	Hollow Point	6,5	100	2625	5.6	6.7	⊕	-16.3	-44.9	-89.3	11.0	50.1
Diamond Line Bana	16500	.548	Hollow Point	8,4	130	2625	4.9	5.7	⊕	-13.2	-34.9	-66.5	6.2	27.3
Diamond Line Fält	16530	.548	Hollow Point	8,4	130	2953	3.6	4.4	⊕	-10.1	-26.8	-51.0	5.2	22.9
Golden Target	16513	.548	Hollow Point	8,4	130	2723	4.5	5.3	⊕	-12.1	-32.2	-61.3	5.9	25.9
6 mm Norma BR														
Diamond Line Berger	16016	.517	Hollow Point	6,8	105	2789	4.2	5.0	⊕	-11.4	-30.2	-57.5	5.5	24.3
.308 Win.														
Diamond Line Sierra	17615	.470	Hollow Point	10,9	168	2549	5.5	6.4	⊕	-14.9	-39.8	-76.6	7.6	34.5
7,5x55 Swiss														
Diamond Line Sierra	17516	.560	Hollow Point	12,3	190	2592	5.1	5.9	⊕	-13.5	-35.6	-67.7	6.1	28.8

.22 Long Rifle							Height of trajectory above line of sight 25 yds	50 yds	75 yds	100 yds	150 yds	100 yds
Norma 1 Match	15613	–	Lead, round nose	2,6	40	1066	0,2	⊕	-2,4	-7,3	-24,5	3,8
Norma 2 Training	15614	–	Lead, round nose	2,6	40	1066	0,2	⊕	-2,4	-7,3	-24,5	3,8

6 mm Norma BR

A world-leading match cartridge for 300 m rifle shooting. Low recoil, stable in wind, and very high accuracy. The bullet is moly coated.

V_0	2789 fps
Bullet	6,8 g/105 gr Berger HP Diamond Line
Coefficient	0,517

.308 Win. Match

A high-quality product for target shooters. Moly coated bullet for increased accuracy and minimum barrel wear.

V_0	2549 fps
Bullet	10,9 g/168 gr Sierra HP Diamond Line
Coefficient	0,470

7,5x55 Swiss*)

Specially made for the Swiss market, with maximum accuracy. Moly coated bullet for higher accuracy and minimum barrel wear.

V_0	2592 fps
Bullet	12,3 g/190 gr Sierra HP Diamond Line
Coefficient	0,560

*)special order

BULLETS FOR HANDLOADING

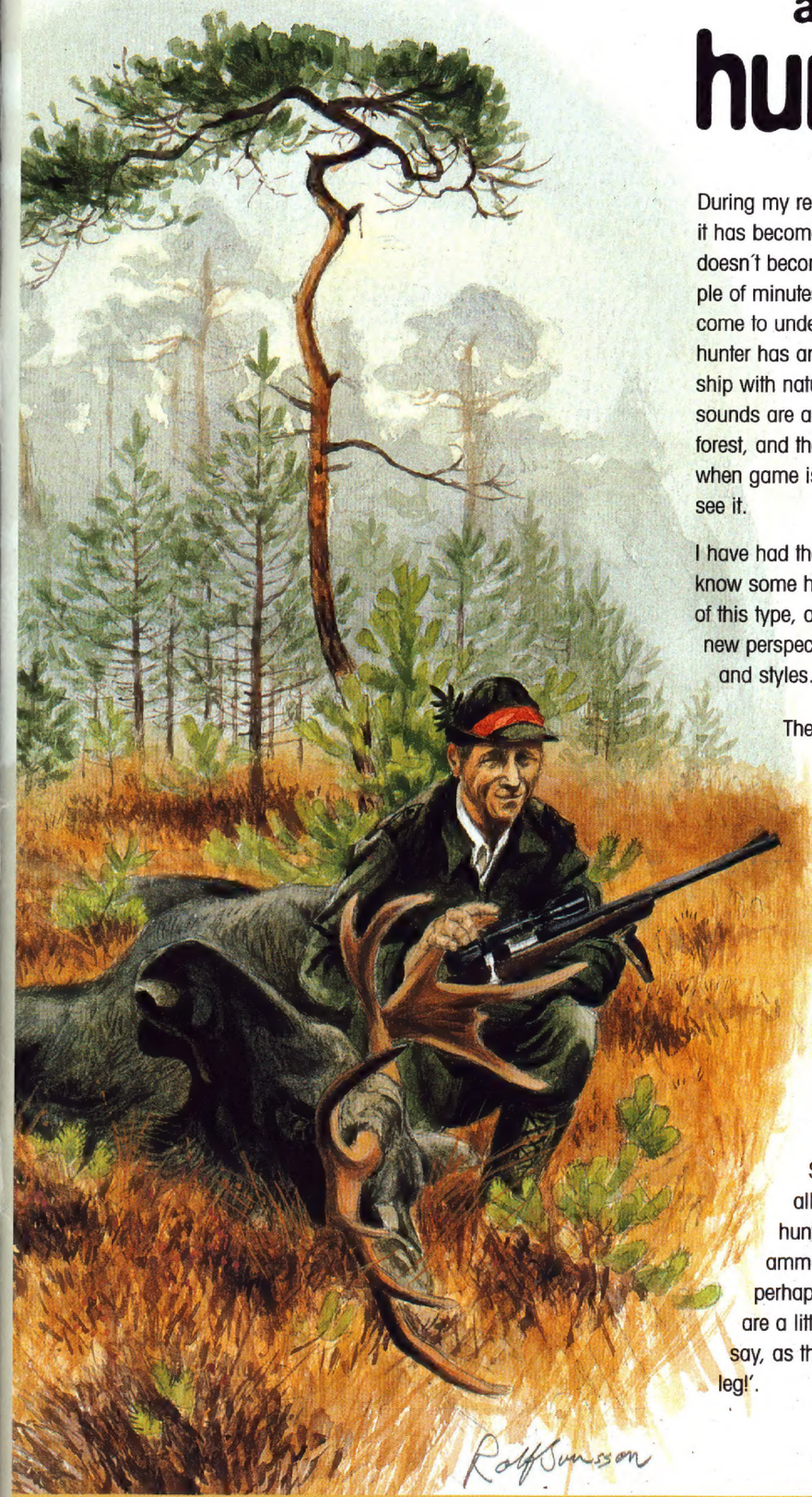
Product name	Product number	Bullet type	Bullet weight gram	grains
Rifle bullets				
6,5 mm	66520	Hollow point	6,5	100
6,5 mm	66508	HP Diamond Line	8,4	130
6,5 mm	66509	Hollow point	8,4	130

Promotion products

Article	Size
1. Cap Product No 66040101	
2. Bag Product No 66040102	
3. Denim shirts Product No 66040106	M, L, XL
4. Piquet sweater Product No 66040107	M, L, XL, XXL
5. Knife Product No 66040109	
6. Thermos Product No 66040108	

BALLISTIC DATA

Caliber	Bullet type Bullet weight gram/grains Product number	Ball coef.	Velocity feet per second Muzzle	 $V_{100\ yds}$	 $V_{200\ yds}$	 $V_{300\ yds}$	Energy foot pounds Muzzle	 $E_{100\ yds}$	 $E_{200\ yds}$	 $E_{300\ yds}$	Zero range, yards	Height of trajectory above line of sight if sighted in a ⊕ yards. For sights 1,6 inch above bore. 50 yds	 100 yds	 150 yds	 200 yds	 300 yds	Wind drift in inches for a 10 m.p.h cross wind 100 yds	 200 yds	 300 yds
.222 REM.	**Soft point** 3.2 g/50 gr Product no. 15711	0.185	3199	2679	2215	1800	1136	797	545	360	50 100 150 200	⊕ -0,3 0 0,5	0,6 ⊕ 0,6 1,6	0 -0,9 ⊕ 1,6	-2,1 -3,3 -2,1 ⊕	-12,1 -13,8 -12,0 -8,9	1,5	6,7	16,7
	Full jacket 3.2 g/50 gr Product no. 15713	0.198	2789	2344	1942	1587	864	610	419	280	50 100 150 200	⊕ -0,1 0,4 1,1	0,3 ⊕ 1,0 2,4	-1,0 -1,5 ⊕ 2,2	-4,3 -4,8 -2,8 ⊕	-18,2 -19,0 -16,1 -11,8	1,7	7,6	18,7
	Soft point 4.0 g/62 gr Product no. 15716	0.214	2887	2464	2078	1731	1148	836	595	413	50 100 150 200	⊕ -0,2 0,2 0,9	0,4 ⊕ 0,8 2,1	-0,7 -1,2 ⊕ 1,9	-3,4 -4,2 -2,5 ⊕	-15,4 -16,5 -14,0 -10,3	1,5	6,6	16,1
.22-250	**Soft point** 3.4 g/53 gr Product no. 15733	0.237	3707	3246	2830	2451	1618	1240	943	707	50 100 150 200	⊕ -0,4 -0,3 0	0,9 ⊕ 0,3 0,9	0,9 -0,4 ⊕ 0,9	0 -1,7 -1,2 ⊕	-5,2 -7,8 -7,0 -5,2	1,0	4,2	10,0
.220 Swift	**Soft point** 3.2 g/50 gr Product no. 15701	0.185	4019	3394	2852	2369	1794	1279	903	623	50 100 150 200	⊕ -0,5 -0,4 -0,1	1,0 ⊕ 0,2 0,7	1,2 -0,3 ⊕ 0,8	0,5 -1,5 -1,1 ⊕	-4,3 -7,2 -6,7 -5,1	1,2	5,0	12,2
5,6x52 R	**Soft point** 4.6 g/71 gr Product no. 15604	0.268	2789	2456	2146	1860	1227	951	726	546	50 100 150 200	⊕ -0,2 0,3 0,9	0,3 ⊕ 0,9 2,1	-0,8 -1,3 ⊕ 1,9	-3,5 -4,2 -2,5 ⊕	-15,0 -16,0 -13,5 -9,7	1,3	5,3	12,8
	Full jacket 4.6 g/71 gr Product no. 15605	0.275	2789	2463	2160	1880	1227	957	736	557	50 100 150 200	⊕ -0,2 0,3 0,9	0,3 ⊕ 0,8 2,1	-0,8 -1,3 ⊕ 1,9	-3,5 -4,2 -2,5 ⊕	-14,8 -15,8 -13,3 -9,6	1,2	5,2	12,5
6x70 R ☆	**Nosler BST** 5.8 g/90 gr Product no. 16011	0.365	2461	2231	2013	1809	1211	995	810	654	50 100 150 200	⊕ 0 0,6 1,3	0 ⊕ 1,2 2,7	-1,7 -1,7 ⊕ 2,3	-5,4 -5,4 -3,1 ⊕	-19,4 19,4 -15,9 -11,3	1,1	4,5	10,8
.243 Win. ☆	**Full jacket** 5.2 g/80 gr Product no. 16007	0.262	3117	2750	2412	2098	1726	1344	1034	782	50 100 150 200	⊕ -0,3 0 0,5	0,6 ⊕ 0,6 1,5	0 -0,9 ⊕ 1,4	-1,8 -3,0 -1,9 ⊕	-10,3 -12,1 -10,3 -7,5	1,1	4,7	11,2
	Soft point 6.5 g/100 gr Product no. 16003	0.357	3018	1752	2501	2264	2023	1682	1389	1138	50 100 150 200	⊕ -0,3 0 0,5	0,6 ⊕ 0,6 1,5	-0,1 -0,9 ⊕ 1,4	-1,9 -3,0 -1,8 ⊕	-9,9 -11,6 -9,8 -7,1	0,8	3,5	8,2
6,5 JAP.	**Alaska** 10.1 g/156 gr Product no. 16532	0.326	2067	1835	1622	1431	1480	1167	911	710	50 100 150 200	⊕ 0,4 1,3 2,5	-0,7 ⊕ 2,0 4,4	-4,0 -2,9 ⊕ 3,7	-10,2 -8,8 -4,9 ⊕	-32,9 -30,8 -25,0 -17,7	1,6	6,6	15,8
6,5 CARCANO	**Alaska** 10.1 g/156 gr Product no. 16535	0.326	2428	2173	1934	1712	2043	1636	1296	1016	50 100 150 200	⊕ 0 0,6 1,5	-0,1 ⊕ 1,2 2,9	-1,9 -1,9 ⊕ 2,5	-5,9 -5,8 -3,3 ⊕	-21,1 -20,9 -17,2 -12,2	1,2	5,3	12,5
6,5x55	**Nosler BST** 7.8 g/120 gr Product no. 16522	0.430	2822	2609	2407	2213	2123	1815	1544	1305	50 100 150 200	⊕ -0,2 0,2 0,7	0,4 ⊕ 0,7 1,8	-0,4 -1,1 ⊕ 1,6	-2,7 -3,5 -2,1 ⊕	-11,8 -13,0 -10,9 -7,8	0,8	3,1	7,3
	Nosler Partition 9.1 g/140 gr Product no. 16559	0.467	2690	2500	2317	2142	2250	1943	1669	1427	50 100 150 200	⊕ -0,2 0,3 0,8	0,3 ⊕ 0,8 2,0	-0,8 -1,2 ⊕ 1,7	-3,4 -4,0 -2,3 ⊕	-13,5 -14,4 -12,0 -8,5	0,7	3,1	7,1
	Alaska 10.1 g/156 gr Product no. 16552	0.276	2559	2250	1964	1701	2269	1755	1336	1002	50 100 150 200	⊕ -0,1 0,5 1,3	0,1 ⊕ 1,1 2,7	-1,5 -1,7 ⊕ 2,3	-5,1 -5,3 -3,1 ⊕	-19,4 -19,7 -16,4 -11,7	1,4	5,9	14,1
	Oryx 10.1 g/156 gr Product no. 16562	0.348	2559	2313	2081	1862	2267	1852	1499	1201	50 100 150 200	⊕ -0,1 0,5 1,2	0,1 ⊕ 1,0 2,5	-1,4 -1,6 ⊕ 2,1	-4,7 -4,9 -2,8 ⊕	-17,5 -17,9 -14,8 -10,5	1,1	4,5	10,7
	Vulkan 10.1 g/156 gr Product no. 16556	0.354	2644	2397	2164	1944	2421	1990	1622	1309	50 100 150 200	⊕ -0,1 0,4 1,0	1,2 ⊕ 0,9 2,2	-1,1 -1,4 ⊕ 2,0	-4,0 -4,5 -2,6 ⊕	-15,7 -16,4 -13,6 -9,7	1,0	4,2	10,0
6,5-284 ☆	**Nosler BST** 7.8 g/120 gr Product no. 16564	0.430	3117	2890	2674	2469	2589	2226	1906	1624	50 100 150 200	⊕ -0,3 -0,1 0,3	0,7 ⊕ 0,5 1,3	0,2 -0,7 ⊕ 1,2	-1,3 -2,6 -1,6 ⊕	-8,1 -10,0 -8,6 -6,2	0,7	2,7	6,3
☆	**Nosler Partition** 9.1 g/140 gr Product no. 16565	0.465	2953	2750	2557	2371	2712	2352	2032	1748	50 100 150 200	⊕ -0,3 0 0,5	0,5 ⊕ 0,6 1,5	-0,1 -0,9 ⊕ 1,4	-1,9 -3,0 -1,8 ⊕	-9,7 -11,3 -9,6 -6,8	0,7	2,7	6,3
.270 WIN.	**Soft point** 8.4 g/130 gr Product no. 16902	0.359	3140	2868	2612	2370	2847	2375	1970	1622	50 100 150 200	⊕ -0,3 -0,1 0,3	0,6 ⊕ 0,5 1,3	0,2 -0,7 ⊕ 1,2	-1,4 -2,6 -1,7 ⊕	-8,5 -10,4 -8,9 -6,4	0,8	3,3	7,7
	Soft point 9.7 g/150 gr Product no. 16903	0.373	2799	2556	2326	2108	2610	2177	1802	1480	50 100 150 200	⊕ -0,2 0,2 0,7	0,4 ⊕ 0,8 1,9	-0,6 -1,1 ⊕ 1,7	-3,0 -3,7 -2,2 ⊕	-12,8 -13,9 -11,6 -8,3	0,9	3,7	8,7
7x57 ☆	**Oryx** 10.1 g/156 gr Product no. 17001	Will be introduced during 2001																	
7x64	**Nosler BST** 9.1 g/140 gr Product no. 17052	0.445	2854	2647	2449	2260	2533	2179	1865	1588	50 100 150 200	⊕ -0,2 0,1 0,6	0,5 ⊕ 0,7 1,7	-0,3 -1,0 ⊕ 1,5	-2,5 -3,4 -2,0 ⊕	-11,2 -12,5 -10,5 -7,5	0,7	3,0	6,9
☆	**Oryx** 10.1 g/156 gr Product no. 17053	Will be introduced during 2001																	
	Vulkan 11.0 g/170 gr Product no. 17018	0.353	2756	2503	2263	2037	2865	2362	1931	1564	50 100 150 200	⊕ -0,2 0,2 0,8	0,3 ⊕ 0,8 2,0	-0,7 -1,2 ⊕ 1,8	-3,3 -4,0 -2,3 ⊕	-13,7 -14,8 -12,3 -8,8	1,0	4,0	9,4
	Plastic point 11.0 g/170 gr Product no. 17019	0.378	2756	2519	2294	2081	2865	2393	1985	1632	50 100 150 200	⊕ -0,2 0,2 0,8	0,4 ⊕ 0,8 2,0	-0,7 -1,2 ⊕ 1,7	-3,2 -3,9 -2,3 ⊕	-13,4 -14,4 -12,0 -8,6	0,9	3,7	8,7
7x57 R	**Full jacket** 9.7 g/150 gr Product no. 17006	0.441	2641	2442	2251	2069	2324	1986	1689	1427	50 100 150 200	⊕ -0,1 0,3 0,9	0,3 ⊕ 0,9 2,1	-1,0 -1,3 ⊕ 1,9	-3,7 -4,2 -2,5 ⊕	-14,6 -15,4 -12,7 -9,0	0,8	3,3	7,8
☆	**Oryx** 10.1 g/156 gr Product no. 17003	Will be introduced during 2001																	
7x65 R ☆	**Oryx** 10.1 g/156 gr Product no. 17063	Will be introduced during 2001																	
	Plastic point 11.0 g/170 gr Product no. 17028	0.373	2625	2392	2170	1961	2599	2157	1776	1450	50 100 150 200	⊕ -0,1 0,4 1,0	0,2 ⊕ 0,9 2,3	-1,1 -1,4 ⊕ 2,0	-4,1 -4,5 -2,6 ⊕	-15,8 -16,4 -13,6 -9,7	1,0	4,0	9,5



a real hunter

During my relatively brief time at Norma, it has become clear to me that one doesn´t become a real hunter in a couple of minutes. Slowly but surely I have come to understand that the experienced hunter has an almost mystical relationship with nature. Tracks, smells, and sounds are a natural part of life in the forest, and the expert hunter knows when game is near without needing to see it.

I have had the opportunity to get to know some hunters and woodsmen of this type, and this has given me a new perspective on their personalities and styles.

The true hunter does not necessarily need to shoot every time he is in the forest, but understands the need for sensible care of the things that nature has given us. One of the joys of hunting is to get away from the daily stress that has become the curse of modern life.

So we at Norma wish you all, many very successful hunts, preferably with Norma ammunition in your pack – or perhaps, because all huntsmen are a little superstitious, I should say, as theaterpeople do, 'break a leg!'.

Torbjörn Lindskog
CEO

• personality • care • experience • Norma ammunition • focus on perfection.

Caliber	Bullet type Bullet weight gram/grains Product number	Ball coef.	Velocity feet per second Muzzle	$V_{100\ yds}$	$V_{200\ yds}$	$V_{300\ yds}$	Energy foot pounds Muzzle	$E_{100\ yds}$	$E_{200\ yds}$	$E_{300\ yds}$	Zero range, yards	Height of trajectory above line of sight if sighted in a ⊕ yards. For sights 1,6 inch above bore. 50 yds	100 yds	150 yds	200 yds	300 yds	Wind drift in inches for a 10 m.p.h cross wind 100 yds	200 yds	300 yds
7x65 R	**Vulkan** 11.0 g/170 gr Product no. 17029	0.335	2657	2396	2150	1919	2662	2165	1743	1389	50 100 150 200	⊕ -0,1 0,4 1,0	0,2 ⊕ 0,9 2,2	-1,0 -1,4 ⊕ 2,0	-4,0 -4,5 -2,6 ⊕	-15,8 -16,5 -13,7 -9,8	1,1	4,5	10,6
.280 Rem. ☆	**Oryx** 10.1 g/156 gr Product no. 17048	Will be introduced during 2001																	
	Vulkan 11 g/170 gr Product no. 17051	0.357	2592	2350	2121	1906	2534	2083	1697	1370	50 100 150 200	⊕ -0,1 0,4 1,1	0,2 ⊕ 1,0 2,4	-1,2 -1,5 ⊕ 2,1	-4,4 -4,7 -2,7 ⊕	-16,7 -17,2 -14,2 -10,1	1,0	4,3	10,2
	Plastic point 11 g/170 gr Product no. 17060	0.373	2707	2469	2244	2031	2764	2300	1899	1555	50 100 150 200	⊕ -0,2 0,3 0,9	0,3 ⊕ 0,9 2,1	-0,8 -1,3 ⊕ 1,8	-3,5 -4,1 -2,4 ⊕	-14,3 -15,2 -12,6 -9,0	0,9	3,8	9,1
7 mm Rem. Mag. ☆	**Nosler BST** 9.1 g/140 gr Product no. 17061	0.460	3150	2936	2732	2537	3085	2680	2320	2001	50 100 150 200	⊕ -0,3 -0,1 0,3	0,7 ⊕ 0,5 1,2	0,3 -0,7 ⊕ 1,1	-1,1 -2,4 -1,5 ⊕	-7,6 -9,5 -8,2 -5,9	0,6	2,5	5,8
☆	**Scirocco** 9.7 g/150 gr Product no. 17062	0.536	3117	2934	2758	2589	3237	2869	2535	2234	50 100 150 200	⊕ -0,3 -0,1 -0,3	0,7 ⊕ 0,5 1,2	0,3 -0,7 ⊕ 1,2	-1,1 -2,4 -1,5 ⊕	-7,5 -9,4 -8,1 -5,8	0,5	2,1	5,0
☆	**Oryx** 10.1 g/156 gr Product no. 17047	Will be introduced during 2001																	
	Vulkan 11.0 g/170 gr Product no. 17024	0.353	2953	2688	2438	2201	3293	2728	2244	1830	50 100 150 200	⊕ -0,3 0,1 0,6	0,5 ⊕ 0,6 1,6	-0,2 -1,0 ⊕ 1,5	-2,2 -3,2 -2,0 ⊕	-10,8 -12,3 -10,4 -7,5	0,9	3,6	5,8
	Plastic point 11.0 g/170 gr Product no. 17027	0.378	2953	2705	2470	2247	3293	2763	2304	1907	50 100 150 200	⊕ -0,3 0,1 0,5	0,5 ⊕ 0,6 1,6	-0,2 -0,9 ⊕ 1,4	-2,1 -3,2 -1,9 ⊕	-10,5 -12,0 -10,2 -7,3	0,8	3,4	7,9
7,5x55 ☆	**Oryx** 11.7 g/180 gr Product no. 17510	0.311	2493	2222	1968	1734	2485	1974	1549	1201	50 100 150 200	⊕ 0 0,6 1,4	0 ⊕ 1,2 2,7	-1,7 -1,8 ⊕ 2,4	-5,4 -5,5 -3,2 ⊕	-19,8 -20,0 -16,5 -11,8	1,3	5,3	12,7
7.62 Russ.	**Soft point** 11.7 g/180 gr Product no. 17634	0.406	2575	2362	2159	1967	2651	2231	1864	1546	50 100 150 200	⊕ -0,1 0,4 1,1	0,2 ⊕ 1,0 2,3	-1,2 -1,5 ⊕ 2,0	-4,3 -4,6 -2,7 ⊕	-16,3 -16,8 -13,3 -9,8	0,9	3,8	8,9
7,65 Arg.	**Soft point** 11.7 g/180 gr Product no. 17702	0.425	2592	2388	2193	2007	2686	2279	1922	1610	50 100 150 200	⊕ -0,1 0,4 1,0	0,2 ⊕ 1,0 2,3	-1,1 -1,4 ⊕ 2,0	-4,1 -4,5 -2,6 ⊕	-15,7 -16,3 -13,4 -9,5	0,9	3,6	8,4
7.7 Jap.	**Soft point** 11.7 g/180 gr Product no. 17722	0.427	2493	2294	2104	1924	2485	2104	1770	1479	50 100 150 200	⊕ 0 0,5 1,2	0,1 ⊕ 1,1 2,5	-1,5 -1,6 ⊕ 2,2	-4,9 -5,0 -2,9 ⊕	-17,7 -18,0 -14,7 -10,4	0,9	3,8	8,8
.308 Win. ☆	**Nosler BST** 9.7 g/150 gr Product no. 17625	0.389	2822	2588	2365	2154	2653	2231	1864	1545	50 100 150 200	⊕ -0,2 0,2 0,7	0,4 ⊕ 0,7 1,8	-0,5 -1,1 ⊕ 1,6	-2,8 -3,6 -2,2 ⊕	-12,2 -13,4 -11,3 -8,0	0,8	3,5	8,2
	TXP 10.7 g/165 gr Product no. 17612	0.367	2700	2459	2231	2014	2672	2216	1823	1487	50 100 150 200	⊕ -0,2 0,3 0,9	0,3 ⊕ 0,9 2,1	-0,9 -1,3 ⊕ 1,8	-3,6 -4,2 -2,4 ⊕	-14,5 -15,3 -12,8 -9,1	0,9	3,9	9,3
	Plastic point 11.7 g/180 gr Product no. 17628	0.358	2612	2370	2141	1925	2737	2253	1838	1486	50 100 150 200	⊕ -0,1 0,5 1,1	0,1 ⊕ 1,0 2,4	-1,4 -1,5 ⊕ 2,0	-4,5 -4,7 -2,7 ⊕	-16,8 -17,0 -14,0 -10,0	1,0	4,2	10,0
	Nosler Partition 11.7 g/180 gr Product no. 17635	0.442	2612	2415	2226	2046	2737	2339	1988	1679	50 100 150 200	⊕ -0,1 0,4 1,1	0,1 ⊕ 1,0 2,2	-1,2 -1,4 ⊕ 1,9	-4,2 -4,5 -2,6 ⊕	-15,6 -16,0 -13,1 -9,3	0,8	3,4	7,9
	Alaska 11.7 g/180 gr Product no. 17636	0.257	2612	2278	1968	1687	2728	2074	1549	1138	50 100 150 200	⊕ -0,1 0,5 1,2	0,1 ⊕ 1,1 2,6	-1,4 -1,6 ⊕ 2,3	-4,9 -5,2 -3,0 ⊕	-18,9 -19,4 -16,1 -11,6	1,4	6,2	14,9
	Vulkan 11.7 g/180 gr Product no. 17660	0.315	2612	2329	2064	1817	2737	2176	1709	1325	50 100 150 200	⊕ 0 0,5 1,2	0,1 ⊕ 1,1 2,5	-1,5 -1,6 ⊕ 2,1	-4,8 -4,9 -2,9 ⊕	-17,9 -18,1 -15,0 -10,7	1,2	5,1	12,1
	Oryx 11.7 g/180 gr Product no. 17675	0.288	2612	2313	2034	1776	2737	2146	1659	1265	50 100 150 200	⊕ 0,1 0,4 1,2	0,2 ⊕ 1,0 2,5	-1,3 -1,6 ⊕ 2,2	-4,6 -4,9 -2,9 ⊕	-17,8 -18,3 -15,2 -10,9	1,3	5,4	13,0
.30-06 ☆	**Nosler BST** 9.7 g/150 gr Product no. 17654	0.421	2936	2713	2502	2300	2872	2453	2085	1762	50 100 150 200	⊕ -0,3 0 0,5	0,5 ⊕ 0,6 1,6	-0,2 -0,9 ⊕ 1,4	-2,1 -3,1 -1,9 ⊕	-10,3 -11,8 -10,0 -7,1	0,7	3,1	7,0
	TXP 11.7 g/180 gr Product no. 17518	0.400	2700	2478	2267	2067	2924	2464	2062	1713	50 100 150 200	⊕ -0,2 0,3 0,9	0,3 ⊕ 0,8 2,0	-0,8 -1,3 ⊕ 1,8	-3,5 -4,1 -2,4 ⊕	-14,0 -14,9 -12,4 -8,8	0,9	3,6	8,4
	Alaska 11.7 g/180 gr Product no. 17648	0.257	2700	2359	2044	1755	2914	2225	1670	1231	50 100 150 200	⊕ -0,1 0,4 1,1	0,2 ⊕ 1,0 2,4	-1,1 -1,5 ⊕ 2,1	-4,2 -4,7 -2,8 ⊕	-17,1 -17,8 -14,9 -10,7	1,4	5,9	14,2
	Nosler 11.7 g/180 gr Product no. 17649	0.438	2700	2497	2303	2118	2924	2501	2128	1800	50 100 150 200	⊕ -0,1 0,3 0,9	0,2 ⊕ 0,9 2,0	-1,0 -1,3 ⊕ 1,8	-3,7 -4,1 -2,4 ⊕	-14,1 -14,7 -12,2 -8,6	0,8	3,2	7,6
	Plastic point 11.7 g/180 gr Product no. 17653	0.366	2700	2458	2229	2013	2914	2416	1987	1620	50 100 150 200	⊕ -0,1 0,4 1,0	0,2 ⊕ 0,9 2,1	-1,1 -1,3 ⊕ 1,9	-3,9 -4,3 -2,5 ⊕	-15,0 -15,6 -12,9 -9,2	1,0	4,3	10,2
	Vulkan 11.7 g/180 gr Product no. 17659	0.315	2700	2420	2158	1912	2924	2350	1868	1466	50 100 150 200	⊕ -0,1 0,4 1,0	0,2 ⊕ 0,9 2,2	-1,1 -1,4 ⊕ 1,9	-4,1 -4,5 -2,6 ⊕	-15,9 -16,4 -13,6 -9,7	1,1	4,7	11,1
	Oryx 11.7 g/180 gr Product no. 17674	0.288	2700	2395	2110	1846	2924	2301	1786	1367	50 100 150 200	⊕ -0,1 0,3 1,0	0,3 ⊕ 0,9 2,3	-1,0 -1,4 ⊕ 2,0	-4,0 -4,5 -2,6 ⊕	-16,1 -16,8 -14,1 -10,1	1,2	5,1	12,3
	Oryx 13.0 g/200 gr Product no. 17677	0.338	2625	2368	2125	1897	3061	2490	2006	1599	50 100 150 200	⊕ -0,1 0,4 1,1	0,2 ⊕ 1,0 2,3	-1,2 -1,5 ⊕ 2,0	-4,2 -4,6 -2,7 ⊕	-16,4 -17,0 -14,1 -10,0	1,1	4,5	10,7
.300 Win. Mag. ☆	**Nosler BST** 9.7 g/150 gr Product no. 17551	0.427	3250	3014	2791	2578	3519	3027	2595	2215	50 100 150 200	⊕ -0,4 -0,2 0,2	0,7 ⊕ 0,4 1,1	0,5 -0,6 ⊕ 1,1	-0,8 -2,2 -1,4 ⊕	-6,8 -8,9 -7,7 -5,6	0,6	2,6	6,0
☆	**Scirocco** 10.7g/165gr Product no. 17552	0.500	3117	2921	2734	2554	3561	3127	2738	2390	50 100 150 200	⊕ -0,3 -0,1 0,3	0,7 ⊕ 0,5 1,2	0,3 -0,7 ⊕ 1,2	-1,2 -2,5 -1,6 ⊕	-7,7 -9,6 -8,2 -5,9	0,6	2,3	5,4

Caliber	Bullet type Bullet weight gram/grains Product number	Ball coef.	Velocity feet per second Muzzle	$V_{100\ yds}$	$V_{200\ yds}$	$V_{300\ yds}$	Energy foot pounds Muzzle	$E_{100\ yds}$	$E_{200\ yds}$	$E_{300\ yds}$	Zero range, yards	Height of trajectory above line of sight if sighted in a ⊕ yards. For sights 1,6 inch above bore. 50 yds	100 yds	150 yds	200 yds	300 yds	Wind drift in inches for a 10 m.p.h cross wind 100 yds	200 yds	300 yds
.300 Win. Mag.	**TXP** 11.7 g/180 gr Product no. 17519	0.400	2920	2687	2466	2256	3420	2897	2440	2042	50 100 150 200	⊕ -0,3 0,1 0,6	0,5 ⊕ 0,6 1,6	-0,2 -1,0 ⊕ 1,5	-2,2 -3,2 -2,0 ⊕	-10,7 -12,2 -10,3 -7,3	0,8	3,2	7,5
	Plastic point 11.7 g/180 gr Product no. 17687	0.366	3018	2758	2513	2281	3641	3042	2525	2080	50 100 150 200	⊕ -0,3 0 0,5	0,6 ⊕ 0,6 1,5	0 -0,9 ⊕ 1,4	-1,9 -3,0 -1,8 ⊕	-9,8 -11,5 -9,8 -7,0	0,8	3,4	8,0
	Oryx 13.0 g/200 gr Product no. 17676	0.323	2789	2510	2248	2002	3455	2799	2245	1780	50 100 150 200	⊕ -0,2 0,2 0,8	0,4 ⊕ 0,8 2,0	-0,7 -1,2 ⊕ 1,8	-3,2 -3,9 -2,3 ⊕	-13,7 -14,8 -12,4 -8,9	1,0	4,3	10,3
.308 Norma Mag. ☆	**TXP** 11.7 g/180 gr Product no. 17553	0.377	2953	2704	2469	2245	3486	2924	2437	2016	50 100 150 200	⊕ -0,3 0 0,5	0,5 ⊕ 0,6 1,6	-0,2 -0,9 ⊕ 1,4	-2,1 -3,2 -1,9 ⊕	-10,5 -12,1 -10,2 -7,3	0,8	3,4	7,9
8x57 JS	**Alaska** 12.7 g/196 gr Product no. 18003	0.305	2526	2248	1988	1747	2778	2200	1720	1328	50 100 150 200	⊕ 0 0,5 1,3	0,1 ⊕ 1,1 2,7	-1,6 -1,7 ⊕ 2,3	-5,2 -5,3 -3,1 ⊕	-19,3 -19,5 -16,1 -11,5	1,3	5,3	12,8
	Oryx 12.7 g/196 gr Product no. 18004	0.331	2526	2269	2027	1802	2778	2241	1789	1413	50 100 150 200	⊕ 0 0,5 1,3	0,1 ⊕ 1,1 2,6	-1,5 -1,7 ⊕ 2,2	-5,0 -5,2 -3,0 ⊕	-18,6 -18,9 -15,6 -11,1	1,2	4,9	11,6
	Vulkan 12.7 g/196 gr Product no. 18020	0.347	2526	2281	2049	1832	2778	2264	1828	1461	50 100 150 200	⊕ -0,1 0,5 1,2	0,1 ⊕ 1,1 2,6	-1,5 -1,6 ⊕ 2,2	-4,9 -5,1 -2,9 ⊕	-18,3 -18,5 -15,3 -10,9	1,1	4,6	11,0
8x57 JRS	**Oryx** 12.7 g/196 gr Product no. 18010	0.331	2395	2146	1912	1695	2497	2004	1591	1251	50 100 150 200	⊕ 0,1 0,7 1,5	-0,1 ⊕ 1,3 3,0	-2,1 -1,9 ⊕ 2,6	-6,2 -6,0 -3,4 ⊕	-21,8 -21,5 -17,6 -12,6	1,3	5,3	12,6
	Alaska 12.7 g/196 gr Product no. 18018	0.296	2395	2117	1859	1623	2497	1951	1504	1146	50 100 150 200	⊕ 0,1 0,7 1,6	-0,1 ⊕ 1,3 3,1	-2,2 -2,0 ⊕ 2,7	-6,4 -6,2 -3,5 ⊕	-22,9 -22,5 -18,5 -13,2	1,4	6,0	14,3
	Vulkan 12.7 g/196 gr Product no. 18019	0.345	2395	2156	1930	1720	2497	2023	1622	1289	50 100 150 200	⊕ 0,1 0,7 1,5	-0,1 ⊕ 1,3 3,0	-2,0 -1,9 ⊕ 2,5	-6,1 -5,9 -3,4 ⊕	-21,4 -21,2 -17,4 -12,3	1,2	5,0	12,0
.338 Win. Mag. ☆	**TXP** 14.6 g/225 gr Product no. 18500	0.384	2740	2507	2286	2075	3752	3141	2611	2153	50 100 150 200	⊕ -0,2 0,2 0,8	0,3 ⊕ 0,8 2,0	-0,7 -1,2 ⊕ 1,7	-3,3 -4,0 -2,3 ⊕	-13,6 -14,6 -12,1 -8,7	0,9	3,7	8,6
.358 Norma Mag. ☆	**TXP** 16.2 g/250 gr Product no. 19006	0.347	2723	2467	2225	1996	4117	3379	2748	2213	50 100 150 200	⊕ -0,2 0,3 0,9	0,3 ⊕ 0,9 2,1	-0,8 -1,3 ⊕ 1,8	-3,5 -4,1 -2,4 ⊕	-14,4 -15,3 -12,8 -9,1	1,0	4,1	9,8
9,3x57 ☆	**Oryx** 18.5 g/285 gr Product no. 19301	Will be introduced during 2001																	
9,3x62	**Vulkan** 15.0 g/232 gr Product no. 19317	0.278	2625	2314	2025	1758	3551	2759	2112	1593	50 100 150 200	⊕ -0,1 0,4 1,2	0,2 ⊕ 1,0 2,5	-1,3 -1,5 ⊕ 2,2	-4,6 -4,9 -2,9 ⊕	-17,9 -18,4 -15,3 -11,0	1,3	5,6	13,5
☆	**Oryx** 18.5 g/285 gr Product no. 19313	Will be introduced during 2001																	
	Plastic point 18.5 g/285 gr Product no. 19314	0.376	2362	2143	1937	1743	3532	2908	2375	1924	50 100 150 200	⊕ 0,1 0,7 1,6	-0,1 ⊕ 1,3 3,0	-2,1 -2,0 ⊕ 2,5	-6,2 -6,0 -3,4 ⊕	-21,6 -21,3 -17,4 -12,3	1,1	4,7	11,1
	Alaska 18.5 g/285 gr Product no. 19315	0.365	2362	2137	1925	1727	3532	2891	2345	1887	50 100 150 200	⊕ 0,1 0,7 1,6	-0,1 ⊕ 1,3 3,0	-2,2 -2,0 ⊕ 2,6	-6,3 -6,0 -3,4 ⊕	-21,9 -21,5 -17,6 -12,4	1,2	4,8	11,4
9,3x74 R	**Vulkan** 15.0 g/232 gr Product no. 19321	0.294	2559	2269	1998	1747	3374	2652	2056	1573	50 100 150 200	⊕ -0,1 0,5 1,3	0,1 ⊕ 1,1 2,6	-1,5 -1,6 ⊕ 2,3	-5,0 -5,2 -3,0 ⊕	-18,8 -19,2 -15,9 -11,4	1,3	5,5	13,1
	Alaska 18.5 g/285 gr Product no. 19320	0.365	2362	2137	1925	1727	3532	2891	2345	1887	50 100 150 200	⊕ 0,1 0,7 1,6	-0,1 ⊕ 1,3 3,0	-2,2 -2,0 ⊕ 2,6	-6,3 -6,0 -3,4 ⊕	-21,9 -21,5 -17,6 -12,4	1,2	4,8	11,4
	Plastic point 18.5 g/285 gr Product no. 19325	0.365	2362	2137	1925	1727	3532	2891	2345	1887	50 100 150 200	⊕ 0,1 0,7 1,6	-0,1 ⊕ 1,3 3,0	-2,2 -2,0 ⊕ 2,6	-6,3 -6,0 -3,4 ⊕	-21,9 -21,5 -17,6 -12,4	1,2	4,8	11,4
☆	**Oryx** 18.5 g/285 gr Product no. 19332	Will be introduced during 2001																	
.375 H&H Mag.	**TXP** 19.4 g/300 gr Product no. 19503	0.325	2559	2296	2048	1817	4363	3511	2794	2199	50 100 150 200	⊕ -0,1 0,5 1,2	0,1 ⊕ 1,1 2,5	-1,4 -1,6 ⊕ 2,2	-4,8 -5,0 -2,9 ⊕	-18,0 -18,4 -15,2 -10,8	1,2	4,9	11,6
☆	**Barnes Solid** 19.4 g/300 gr Product no. 19505	0.191	2493	2061	1677	1356	4141	2829	1873	1224	50 100 150 200	⊕ 0,1 0,7 1,7	-0,1 ⊕ 1,4 3,4	-2,2 -2,1 ⊕ 2,9	-6,9 -6,7 -3,9 ⊕	-26,3 -26,1 -21,8 -16,0	2,1	9,4	23,3
.416 Rigby ☆	**Barnes Solid** 25.9 g/400 gr Product no. 11050	0.216	2297	1930	1604	1330	4687	3310	2284	1571	50 100 150 200	⊕ 0,2 1,0 2,1	-0,4 ⊕ 1,7 3,9	-3,1 -2,5 ⊕ 3,4	-8,6 -7,9 -4,5 ⊕	-30,5 -29,4 -24,4 -17,7	2,1	9,1	22,4
	TXP 25.9 g/400 gr Product no. 11069	0.367	2349	2126	1916	1720	4902	4017	3262	2628	50 100 150 200	⊕ 0,1 0,7 1,6	-0,1 ⊕ 1,3 3,1	-2,2 -2,0 ⊕ 2,6	-6,4 -6,1 -3,5 ⊕	-22,2 -21,7 -17,8 -12,6	1,2	4,8	11,4
.458 Win. Mag. ☆	**Barnes Solid** 32.4 g/500 gr Product no. 11110	0.235	2067	1750	1472	1245	4745	3401	2405	1721	50 100 150 200	⊕ 0,4 1,5 2,9	-0,8 ⊕ 2,2 4,9	-4,5 -3,2 ⊕ 4,2	-11,5 -9,9 -5,5 ⊕	-38,4 -36,0 -29,5 -21,2	2,2	9,6	23,2
.458 Win. Mag.	**TXP** 32.4 g/500 gr Product no. 11120	0.361	2116	1903	1705	1523	4972	4022	3227	2577	50 100 150 200	⊕ 0,3 1,2 2,3	-0,6 ⊕ 1,8 4,0	-3,5 -2,7 ⊕ 3,4	-9,2 -8,0 -4,5 ⊕	-29,8 -28,1 -22,7 -16,0	1,4	5,7	13,6

When All Norma velocity and striking energy data for hunting cartridges have been obtained in 24 inch test barrels. If your barrel is longer or shorter than 24 inch, as a rule of thumb, your muzzle velocity changes by 5-10 fps for each 0,4 inch difference. The velocity increases in longer barrels and decreases in shorter. Muzzle velocity of a cartridge also varies from gun to gun, due to different barrel material, length, wear, inside dimensions etc.

Therefore, all data and tables should be considered guides only. Our ballistics data are obtained in barrels representing averages of those available on the market. We calibrate our barrels according to international standards (CIP). We recommend that you zero-in your gun after each change of ammunition.

☆ = new for 2001

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